

2017

ANNUAL OPERATING PLAN
for
FISH PRODUCTION PROGRAMS
in the
CLEARWATER RIVER BASIN

by

U.S Fish and Wildlife Service

Idaho Department of Fish and Game

Nez Perce Tribe

Draft May 30, 2017

1. Summer Steelhead

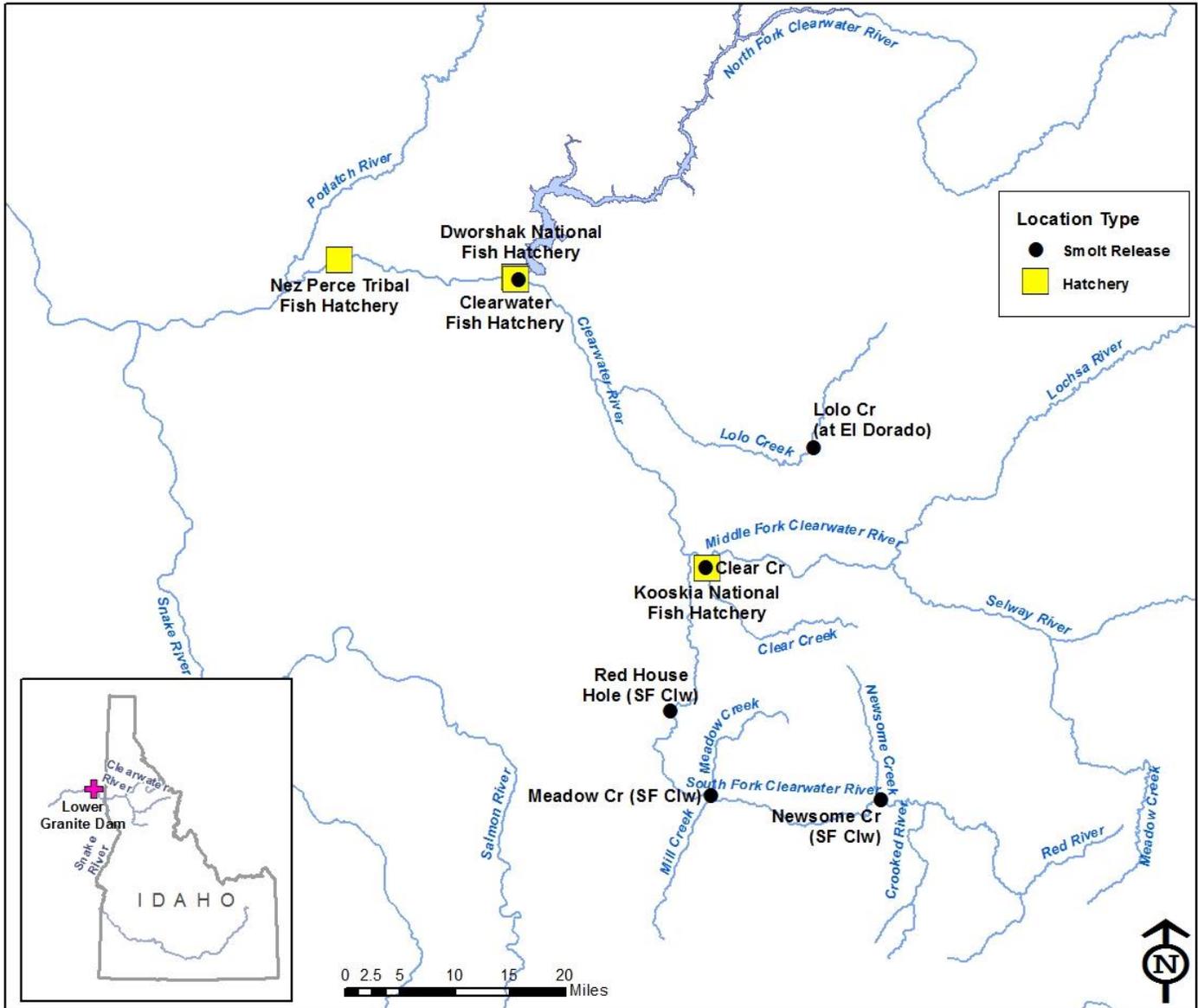


Figure 1.1. Steelhead trapping, hatchery facilities and smolt release locations. Table below gives smolt release goals by release site.

Table 1.1. BY 2016 Steelhead Release Goals for 2017.

Program	Brood Collection Site	Rearing Facility	Release Site	Smolt Release Goals	Size (FPP)
DNFH	DNFH	DNFH	DNFH	1,200,000	6
	DNFH		Clear Creek	300,000	6
	SFClwR Angler (DNFH)		Red House Hole-SF Clw	400,000	6
	DNFH		Lolo Creek	200,000	6
Total				2,100,000	
CFH	SFClwR Angler (DNFH)	CFH/DNFH	Meadow Creek-SF Clw	501,000	4.5
			Red House Hole-SF Clw	219,000	4.5
			Newsome Creek-SF Clw	123,000	4.5
Total				843,000	
Grand Total				2,943,000	

1.1. Timeline and Flowchart for Steelhead Production

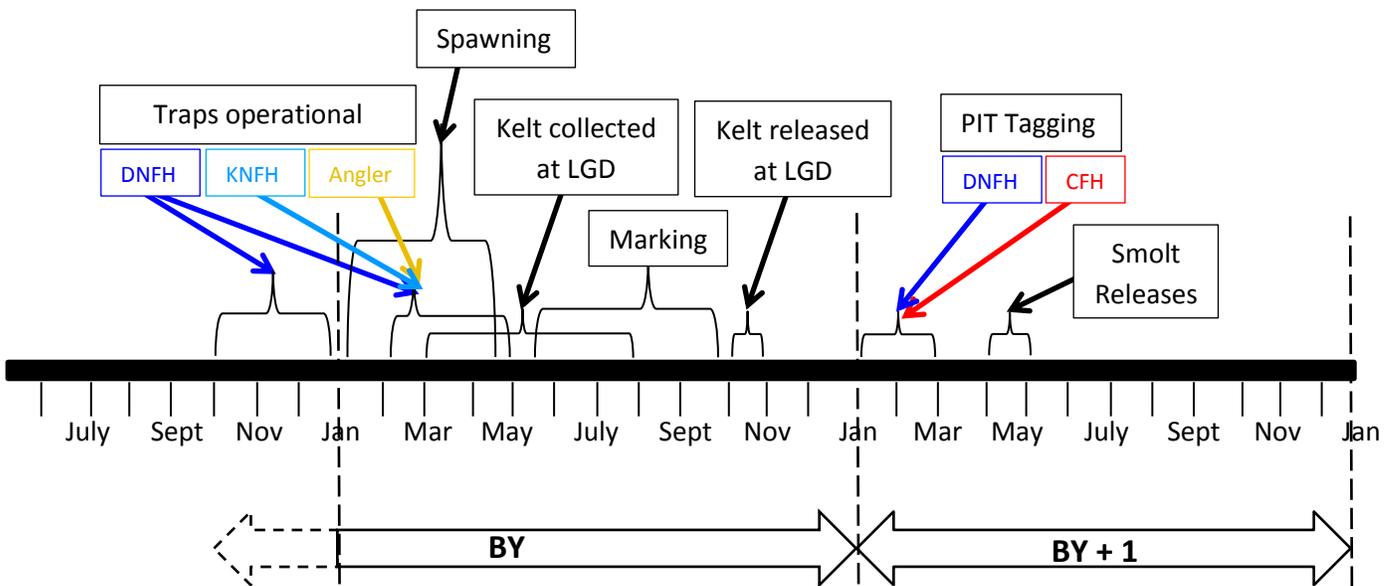


Figure 1.2. Timeline for Steelhead Production. Date ranges with black labels are shown to include all facilities’ operations. Color-coded labels identify activities that have variability in timing for the different facilities.

1.2. Releases in 2017 (Smolt BY 2016)

1.2.1. Releases in 2017 (Smolt BY 2016) – Totals

Table 1.2a. Steelhead Rearing Metrics for BY 2016 fish for release in 2017

Program	Brood Collection Site	Rearing Facility	Release Site	Release Goals		Inventory To Date		Excess Fry/ Fingerlings Released		Projected Smolt Releases		
				Number	Size (FPP)	Date	Number	Number	Release Site	Dates	Number	Size (FPP)
DNFH	DNFH	DNFH	DNFH	1,200,000	6.0	12/1/2016	1,340,345	0		4/10-4/28/2017	1,326,942	6
			Clear Creek	300,000	6.0	12/1/2016	406,090	0		4/10-4/28/2017	402,029	6
			Red House Hole-SF Clw	400,000	6.0	12/1/2016	415,016	0		4/10-4/28/2017	410,866	6
			Lolo Creek	200,000	6.0	12/1/2016	281,003	0		4/10-4/28/2017	278,193	6
Total				2,100,000			2,442,454	0			2,418,029	
CFH	SFCIwR Angler (DNFH)	CFH	Meadow Creek-SF Clw	501,000	4.5	11/28/2016	597,307			4/3-4/6/2017	594,369	5.2
			Red House Hole-SF Clw	219,000	4.5	11/28/2016	238,714			4/6-4/10/2017	237,212	5.2
			Newsome Creek-SF Clw	123,000	4.5	11/28/2016	145,307			4/10-4/12/2017	144,558	5.2
Totals				843,000			981,328	0			976,139	
Grand Total				2,943,000			3,423,782	0			3,394,168	

Table 1.2b. BY 2016 Steelhead Inventory to Date by Mark Type for release in 2017.

Program	Brood Collection Site	Rearing Facility	Release Site	Inventory to Date						PIT Tags				
				Date	Total	Adipose Fin Clip		No Clip		Total # Tags ¹	Funding Source ²			
						No CWT	CWT	CWT	No CWT		CSS	LSRCP	NPT	USFWS
DNFH	DNFH	DNFH	DNFH	12/1/2016	1,340,345	1,239,269	101,076	0	0	18,063	6,500	-	-	11,500
			Clear Creek	12/1/2016	406,090	365,930	40,160	0	0	5,491	2,300	-	-	3,200
			Red House Hole-SF Clw	12/1/2016	415,016	374,504	40,512	0	0	5,581	2,300	-	-	3,300
			Lolo Creek	12/1/2016	281,003	0	0	0	281,003	3,692	1,800	-	-	2,000
Total					2,442,454	1,979,703	181,748	0	281,003	32,827	12,900	-	-	20,000
CFH	SFCIwR Angler (DNFH)	CFH	Meadow Creek-SF Clw	11/28/2016	597,307	340,281	0	158,957	98,069	10,800	3,200	7,600	-	-
			Red House Hole-SF Clw	11/28/2016	238,714	238,714	0	0	0	4,700	1,400	3,300	-	-
			Newsome Creek-SF Clw	11/28/2016	145,307	0	0	0	145,307	5,897	800	1,800	3,297	-
Totals					981,328	578,995	0	158,957	243,376	21,397	5,400	12,700	3,297	-
Grand Total					3,423,782	2,558,698	181,748	158,957	524,379	54,224	18,300	12,700	3,297	20,000

¹ Represents actual number tagged if tags have already been applied at the time of this report

² Represents number of tags paid for by each agency. Sum total may not equal "Total # Tags" for locations where tagging has already occurred

1.2.2. Releases in 2017 (Smolt BY 2016) - Narrative

Here are examples of things managers talk about for each release group, if there are departures from the norm (i.e., SOP). If no departure from the norm, enter NC for “No Change”.

- **Smolt/Egg Release Targets**- e.g. Were you below goal? Was you size at release different than SOP target? Did you depart from the mark plan?
- **Fish/Egg Health**- any epizootic history, anti-biotic treatments, was production culled at any point
- **Transportation/Releases**- e.g. timing, trucking issues, site access etc.

Release Location	Plan for 2017		Changes/Conditions that Occurred 2016-Early 2017		
	Release Target Smolt BY16	Transport/Release Smolt BY16	Fish Feeding BY16	Fish/Egg Health BY16	Marking BY16
<i>Dworshak National Fish Hatchery (SOP Section 1.2)</i>					
Dworshak National Fish Hatchery (DworB)	NC	NC	NC	NC	NC
Clear Creek (DworB)		NC	NC	NC	NC
Red House, SF Clearwater (DworB)		NC	NC	NC	NC
Lolo Creek (DworB)		NC	NC	NC	NC
<i>Clearwater Fish Hatchery (SOP Section 1.3)</i>					
Meadow Creek SF Clearwater (SFClwB/DworB)	Actual release will be approx 594,369	NC	NC	NC	NC

	Plan for 2017		Changes/Conditions that Occurred 2016-Early 2017		
Release Location	Release Target Smolt BY16	Transport/Release Smolt BY16	Fish Feeding BY16	Fish/Egg Health BY16	Marking BY16
Red House Hole SF Clearwater (SFClwB/DworB)	Actual release will be approx 237,212	NC	NC	NC	NC
Newsome Creek SF Clearwater (SFClwB/DworB)	Actual release will be approx 144,558	NC	NC	NC	NC

1.3. Trap Operations and Production Planning for 2017 (Smolt BY 2017)

BY 2017 Steelhead smolt production goals for release in 2018.

Program	Brood Collection Site	Rearing Facility	Release Site	Smolt Release Goals
DNFH	DNFH	DNFH	DNFH	1,200,000
	DNFH		Clear Creek	300,000
	SFCIwR Angler (DNFH)		Red House Hole-SF Clw	400,000
	DNFH		Lolo Creek	200,000
Total				2,100,000
CFH	SFCIwR Angler (DNFH)	CFH/DNFH	Meadow Creek-SF Clw	501,000
			Red House Hole-SF Clw	219,000
			Newsome Creek-SF Clw	123,000
Total				843,000
Grand Total				2,943,000

1.3.1. Trap Operations and Production Planning for 2017 (Smolt BY 2017) – TOTALS

Table 1.3a. 2017 Adult cumulative brood stock acquisition schedules for hatchery steelhead programs in the Clearwater River ¹

Season	Date	Dworshak Trap ²	SF Clw Localized
Fall	Oct	150	NA
	Nov	150	
	Dec	100	
Spring	7-Feb	126	594
	21-Feb	126	
	22-Feb		
	28-Feb	120	
	1-Mar		
	8-Mar		
	14-Mar	60	
	15-Mar		
	21-Mar	60	
	28-Mar	60	
	11-Apr	120	
TOTAL		1,072	594
LGR Return	2016-17 Projected	12,185	1,936
	Previous 5-yr Avg	6,877	1,379

¹ Approximate acquisition schedule based on average historic acquisition timing and number of adults needed to meet broodstock needs based on the broodstock calculator.

² Total Broodstock Calculator Dworshak Trap need is 962. Trapping to 1,072 (110 extra fish in fall collection) insures adequate supply of males for early (fall return) takes.

Table 1.3b. BY 2017 - Steelhead Spawning/Egg Take Plan.

Take		Eggs / Female by Spawn Type		Hatchery Program / Brood Source / Females Spawmed By Method / Green Eggs Taken																											
				DNFH - All Releases										CFH - South Fork Clearwater							MVH- Upper Salmon R. 1			Grand Totals							
				DWORK			Reconditioned Kelts			SFCWR				Green Eggs Projections Combined	DWORK			SFCWR				Green Eggs Projections Combined	DWORK								
				Kill Sp	Air Sp	Total	Females	Green Eggs Projections	Kill Sp	Air Sp	Total	Green Eggs Projections	Kill Sp		Air Sp	Total	Green Eggs Projections	Green Eggs Projections Combined	Kill Sp	Air Sp	Total		Green Eggs Projections	Green Eggs Projections Combined	Kill Sp	Air Sp	Total	Green Eggs Projections	Kill Sp	Air Sp	Total
1 E	10-Jan	6,681		60	60	400,860		0	0			0	0	400,860		0	0			0		0	0			0	0	60	0	60	400,860
2 E	24-Jan	6,681		60	60	400,860		0	0			0	0	400,860		0	0			0		0	0			0	0	60	0	60	400,860
3	7-Feb		6,037		63	380,331		0	0			0	0	380,331		0	0			0		0	0			0	0	63	63	380,331	
4	21-Feb		6,037		63	380,331		0	0			0	0	380,331		0	0			0		0	0			0	0	63	63	380,331	
4CW	22-Feb	6,681			0	0		0	0			0	0	0		0	0	47	47	314,007	314,007		0	0	47	0	47	0	47	314,007	
5	28-Feb		6,037		60	362,220		0	0			0	0	362,220		0	0			0		0	0			0	0	60	60	362,220	
5CW	1-Mar	6,681			0	0		0	0			0	0	0		0	0	47	47	314,007	314,007		0	0	47	0	47	0	47	314,007	
6CW	8-Mar	6,681			0	0		0	0			0	0	0		0	0	46	46	307,326	307,326		0	0	46	0	46	0	46	307,326	
7	14-Mar	6,681		30	30	200,430		0	0	33	33	220,473	420,903		0	0			0	0		0		0	63	0	63	420,903			
7CW	15-Mar	6,681			0	0		0	0			0	0	0		0	0	46	46	307,326	307,326		0	0	46	0	46	0	46	307,326	
8	21-Mar	6,681		30	30	200,430		0	0	33	33	220,473	420,903		0	0			0	0		0	20	20	133,620	83	0	83	554,523		
9	28-Mar	6,681		30	30	200,430		0	0	33	33	220,473	420,903		0	0			0	0		0		0	63	0	63	420,903			
10	11-Apr	6,681		60	60	400,860		0	0			0	0	400,860		0	0			0		0	0			0	60	60	400,860		
Cumulative				270	186	456	2,926,752	0	0	0	99	0	99	0	3,588,171	0	0	0	186	0	186	1,242,666	1,242,666	20	0	20	133,620	575	186	761	4,964,457

¹ Current projections of MVFH DWORK-B program are for spawning 20 females, assuming Uppers Salmon River B-Run adults return to Pahsimeroi and Yankee Fk. traps as predicted.

1.3.2. Trap Operations and Production Planning for 2017 (Smolt BY 2017) – NARRATIVE

Here are examples of things managers were instructed to discuss for each release group, if there are departures from the norm (i.e., SOP). If no departure from the norm, enter NC for “No Change”.

Plan for 2017 (BY 2017)					
Rearing Location	Adult Fish Health	Trap Ops	Production target changes	Spawning protocol changes	Disposition of adults
<i>Dworshak/Kooskia National Fish Hatchery Ladder/Trap (Fall 2016-Spring 2017)(SOP Section 1.2)</i>					
Dworshak National Fish Hatchery (DworB)	NC	NC	NC	NC	NC
Clearwater Fish Hatchery (DworB)		NC	NC	NC	NC
Magic Valley Fish Hatchery (DworB)		NC	NC	NC	NC
<i>Reconditioned Kelts (SOP Section 1.2)</i>					
Dworshak National Fish Hatchery (DworB)	NC	NC	NC	Air-spawn target of 195 fish over 3 takes No SF Clearwater air-spawning. Males will be kill spawned. No secondary male AQUI-S tank will be used	NC

Plan for 2017 (BY 2017)					
Rearing Location	Adult Fish Health	Trap Ops	Production target changes	Spawning protocol changes	Disposition of adults
<i>SF Clearwater Anglers (SOP Section 1.3)</i>					
Dworshak National Fish Hatchery (SFClwB)	NC	TBD- Doug and Beau to provide resolution. CFH trucks available through 3/15. NPTH trucks and DNFH staff may be used if brood needs have not yet been met by 3/15	NC	NC	NPT Research personnel will coordinate with IDFG to radio tag 36 natural origin steelhead prior to release.
Clearwater Fish Hatchery (SFClwB)	NC	TBD- Doug and Beau to provide resolution. CFH trucks available through 3/15. NPTH trucks and DNFH staff may be used if brood needs have not yet been met by 3/15	NC	CFH will spawn fish on a separate day using mostly CFH staff	NPT Research personnel will coordinate with IDFG to radio tag 36 natural origin steelhead prior to release.

1.4. Marking and Rearing Plan for 2017 (Smolt BY 2107)

BY 2017 Steelhead smolt production goals for release in 2018.

Program	Brood Collection Site	Rearing Facility	Release Site	Smolt Release Goals
DNFH	DNFH	DNFH	DNFH	1,200,000
	DNFH		Clear Creek	300,000
	SFCIwR Angler (DNFH)		Red House Hole-SF Clw	400,000
	DNFH		Lolo Creek	200,000
Total				2,100,000
CFH	SFCIwR Angler (DNFH)	CFH/DNFH	Meadow Creek-SF Clw	501,000
			Red House Hole-SF Clw	219,000
			Newsome Creek-SF Clw	123,000
Total				843,000
Grand Total				2,943,000

1.4.1. Marking and Rearing Plan for 2017 (Smolt BY 2017) – TOTALS

Table 1.4a. Steelhead Projected marking for BY 2017 Production for release in 2018.

Program	Brood Collection Site	Rearing Facility	Release Site	Smolt Release Goals	Projected Marking				Total # Tags	PIT Tags				
					Adipose Fin Clip		No Clip			Funding Source				
					No CWT	CWT	CWT	No CWT		CSS	LSRCP	IPC	ACOE	USFWS
DNFH	DNFH	DNFH	DNFH	1200000	1100000	100000	0	0	18000	6,500	-	-	-	11500
			Clear Creek	300000	260000	40000	0	0	5500	2,300	-	-	-	3200
			Red House Hole-SF Clw	400000	360000	40000	0	0	5600	2,300	-	-	-	3300
			Lolo Creek	200000	200000	0	0	0	3800	1,800	-	-	-	2000
Total				2100000	1920000	180000	0	0	32900	12900	0	0	0	20000
CFH	SFCIwR Angler (DNFH)	CFH	Meadow Creek-SF Clw	501,000	300000	0	140000	70000	10800	3200	7600	-	-	-
			Red House Hole-SF Clw	219,000	220000	0	0	0	4700	1400	3300	-	-	-
			Newsome Creek-SF Clw	123,000	0	0	0	123000	2600	800	1800	-	-	-
Totals				843,000	520000	0	140000	193000	18100	5400	12700	0	0	0
Grand Totals				2,943,000	2440000	180000	140000	193000	51000	18300	12700	0	0	20000

1.4.2. Marking and Rearing Plan for 2017 (Smolt BY 2017) – NARRATIVE

Here are examples of things managers were instructed to discuss for each release group, if there are departures from the norm (i.e., SOP). If no departure from the norm, enter NC for “No Change”.

- **Fish Health** - anticipated changes to normal fish health sampling or treatments
- **Fish feeding** - changes of diets of feed manufacturer, growth regimes etc.
- **Rearing conditions** - incubation, water temp, flow, rearing density changes
- **Marking** - e.g. changes to schedules, fish handling or movement, raceway loading for PBT, %PBT etc.

Release Location	Plan for 2017 (BY 2017)			
	Juvenile Fish Health	Fish Feeding	Rearing Conditions	Marking
<i>Dworshak National Fish Hatchery (SOP Section 1.2)</i>				
Dworshak National Fish Hatchery (DworB)	NC	NC	NC	NC
Clear Creek (DworB)	NC	NC	NC	NC
Red House, SF Clearwater (DworB)	NC	NC	NC	NC
Lolo Creek (DworB)	NC	NC	NC	NC
<i>Clearwater Fish Hatchery (SOP Section 1.3)</i>				
Meadow Creek SF Clearwater (SFClwB/DworB)	Actual release will be approx 93,369(15.8%) fish above release target due to above average on-station survival. Due to excess fish, they may not be able to reach the 4.5ffp release goal.	NC	NC	NC

Release Location	Plan for 2017 (BY 2017)			
	Juvenile Fish Health	Fish Feeding	Rearing Conditions	Marking
Red House Hole SF Clearwater (SFClwB/DworB)	Due to excess fish, they may not be able to reach the 4.5ffp release goal.	NC	NC	NC
Newsome Creek SF Clearwater (SFClwB/DworB)	Actual release will be approx 21,558(15.%) fish above release target due to above average on-station survival. Due to excess fish, they may not be able to reach the 4.5ffp release goal.	NC	NC	Will NPT provide additional PITs?

2. Spring/Summer Chinook

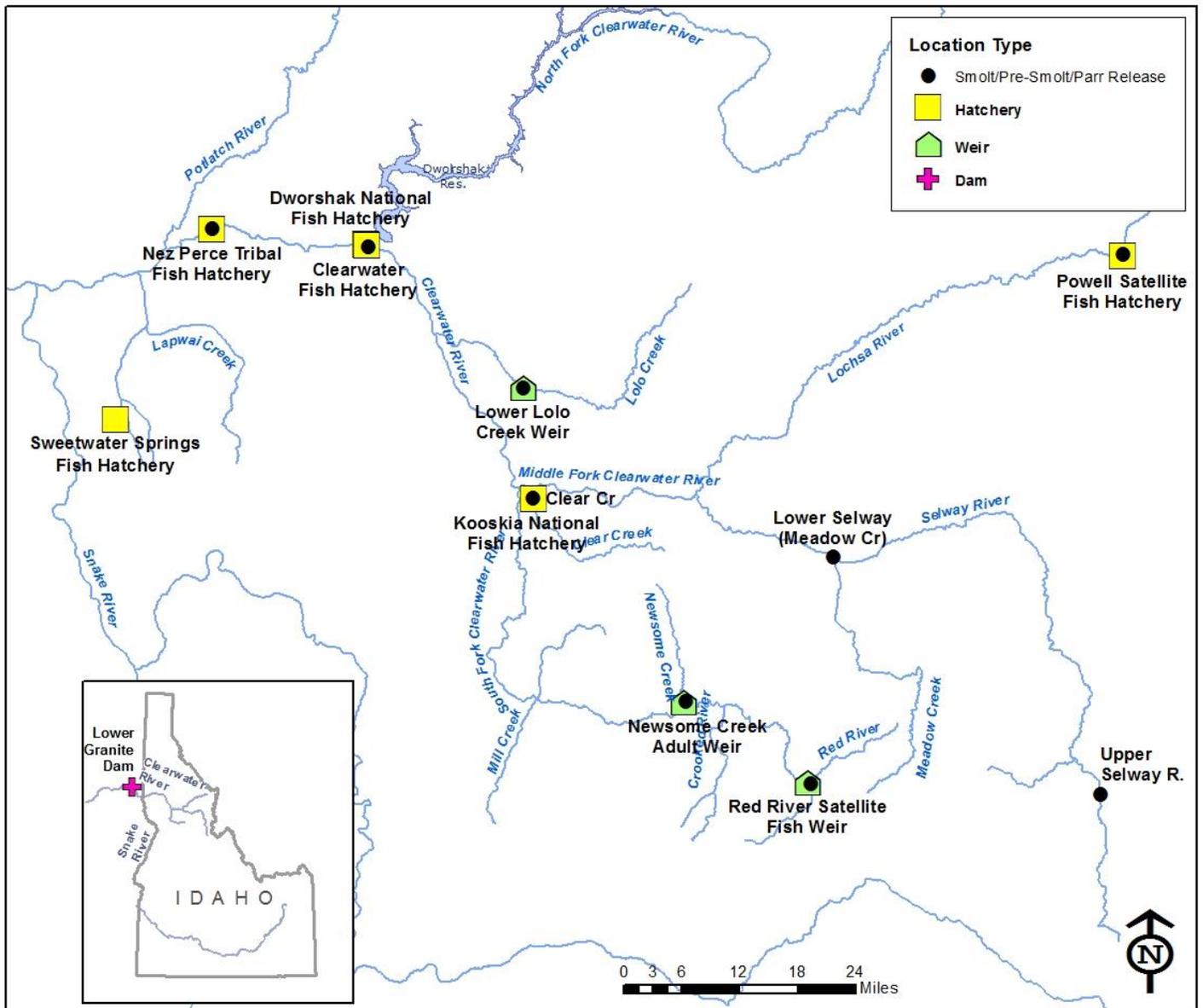


Figure 2.1. Locations of Spring/Summer Chinook Salmon hatchery facilities and smolt/parr/pre-smolt releases. Table below gives smolt and parr/pre-smolt release goals by release site.

Table 2.1. Spring/Summer Chinook Goals for Release in 2017

BY2015 SMOLTS

Action in 2017	Brood/Release Year	Hatchery Program	Brood Collection Site	Rearing Facility	Release Site	Smolt Release Goal		
Release	BY2015 RY2017	Spring						
		DNFH - LSRCP	DNFH	DNFH	NF Clearwater (DNFH)	1,650,000		
		Total					1,650,000	
		KNFH-LSRCP	KNFH	KNFH	Kooskia NFH	600,000		
		Total					600,000	
		NPTHC	Dwor	NPTH	NPTH	200,000		
					Lolo Creek	180,000		
		Total					380,000	
		CFH-LSRCP		SFCIw	CFH	Red River	1,100,000	
						DNFH	NF Clearwater (CFH)	400,000
						DNFH	Selway River-Lower	400,000
						KNFH/Pow	Clear Creek	635,000
		Total					2,535,000	
		Spring Grand Total					5,165,000	
		Summer						
CFH-LSRCP	Pow/SFSR	CFH	Powell Pond	600,000				
Summer Grand Total					600,000			

BY2016 PARR and PRE-SMOLTS SMOLTS

Action in 2017	Brood/Release Year	Hatchery Program	Life Stage	Brood Collection Site	Rearing Facility	Release Site	Smolt Release Goal
Marking and Release	BY2016 RY2017	Spring					
		DNFH	Parr	DNFH	DNFH	Selway River-Upper	300,000
		Total					300,000
		NPTHC	Pre-Smolt	NPTHC	NPTH	Newsome Cr (SF Clw)	75,000
			Pre-Smolt	NPTHC		Lolo Cr (SF Clw)	150,000
			Parr	NPTHC		Meadow Cr (Selway)	400,000
		Total					625,000
Spring Grand Total					925,000		

2.1. Timeline and Flowchart for Spring/Summer Chinook Production

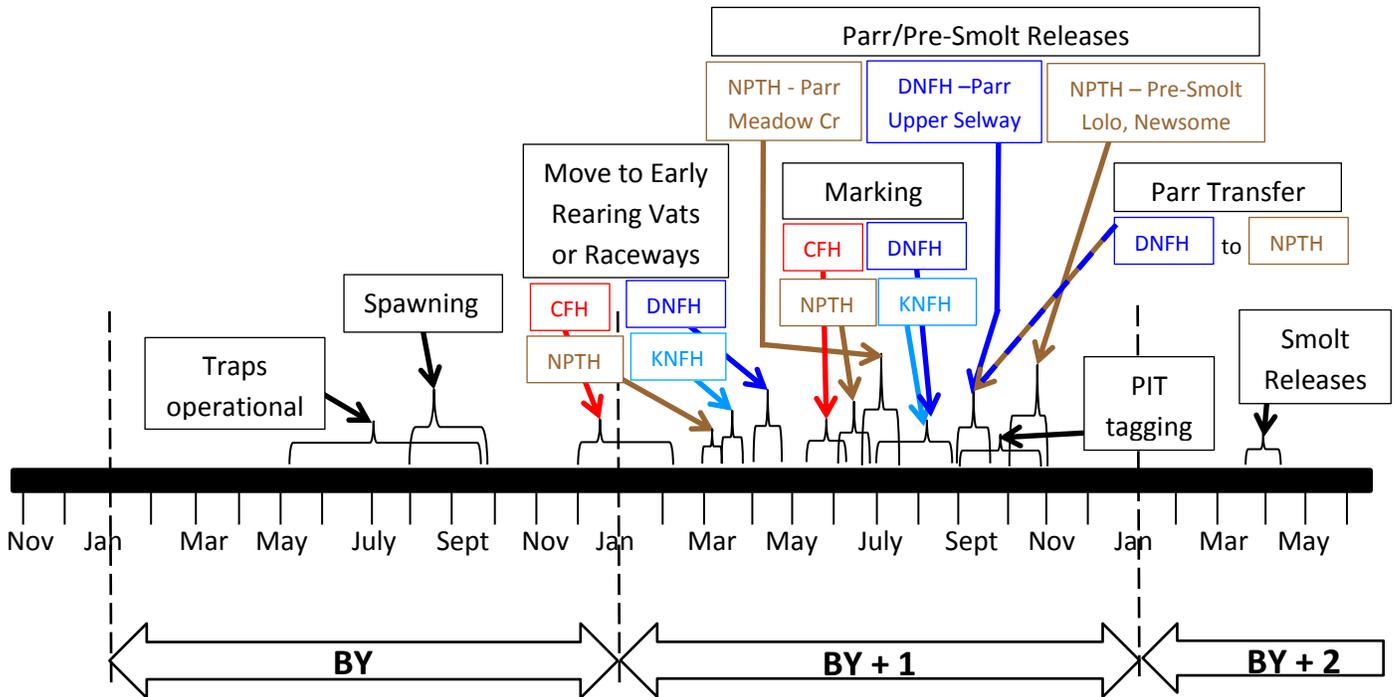


Figure 2.2. Timeline for Spring/Summer Chinook Production. Date ranges with black labels are shown to include all facilities' operations. Color-coded labels identify activities that have variability in timing for the different facilities.

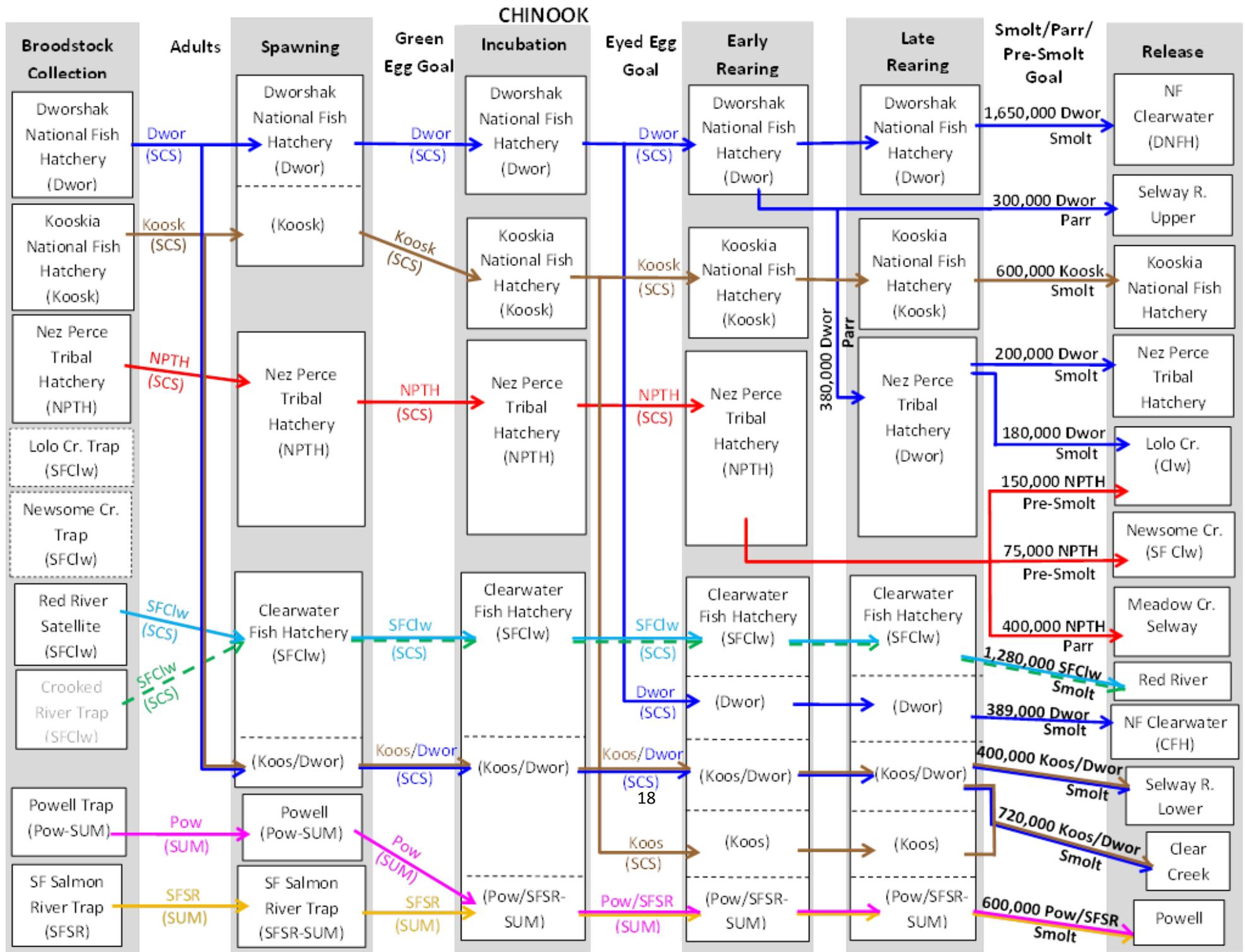


Figure 2.3. Chinook movements for Clearwater. Additional new production not shown in flowchart. Release site/s to be determined.

2.2. Releases in 2017 (Smolt BY 2015, Parr/Pre-Smolt BY 2016)

2.2.1. Releases in 2017 (Smolt BY 2015, Parr/Pre-Smolt BY 2016) – Totals

Table 2.2a. BY2015 SMOLTS - Sp/Su Chinook Salmon inventories by life stage , smolts release goals and projected releases in 2017.

Hatchery Program	Run	Brood Collection Site	Rearing Facility	Release Site	Release Goals		Inventory To Date		Projected Smolt Release		
					Number	Size (FPP)	Date	Number	Dates	Number	Size (FPP)
Spring											
DNFH	SpCS	DNFH	DNFH	NF Clearwater (DNFH)	1,650,000	20.0	12/31/2016	1,507,383	3/31/2017	1,500,000	20.0
Total					1,650,000			1,507,383		1,500,000	
KNFH	SpCS	KNFH	KNFH	Kooskia NFH	600,000		12/31	692,964	3/17/2017	680,000	24.0
Total					600,000			692,964		680,000	
NPTH	SpCS	DNFH	NPTH	NPTH	200,000	20.0	1/10/2017	137,632	4/1/17	136,179	20.0
				Lolo Creek	180,000	20.0	1/10/2017	136,179	4/15/17	134,752	20.0
Total					380,000			273,811		270,931	
CFH-LSRCP	SpCS	SFCIw	CFH	Red River	1,100,000	16.0	11/28/2016	1,290,781	3/27-3/30	1,289,232	16.0
		DHFH		NF Clearwater (CFH)	400,000	16.0	11/28/2016	389,250	3/30-3/31	388,783	16.0
		DNFH		Selway River-Lower	400,000	16.0	11/28/2016	484,045	3/22-3/24	483,464	16.0
		KNFH/Pow		Clear Creek	635,000	16.0	11/28/2016	768,554	3/20-3/22	767,632	16.0
Total					2,535,000			2,932,630		2,929,111	
Spring Grand Total					5,165,000			5,406,788		5,380,042	
Summer											
CFH-LSRCP	SuCS	Pow/SFSR	CFH	Powell Pond	600,000	16.0	11/28/2016	618,985	3/16-3/21	617,980	16.0
				Selway River	0	N/A	11/28/2016	155,241	3/22-3/24	155,055	16.0
Total					600,000			774,226		773,035	
Summer Grand Total					600,000			774,226		773,035	

Table 2.2b. BY2015 SMOLTS - Sp/Su Chinook Salmon Inventory to Date by Mark Type for release in 2017.

Hatchery Program	Run	Brood Collection Site	Rearing Facility	Release Site	Inventory to Date						PIT Tags					
					Date	Total	Adipose Fin Clip		No Clip		Total # Tags	Funding Source				
							CWT	No CWT	CWT	No CWT		CSS	LSRCP	USFWS	BPA	
Spring																
DNFH	SpCS	DNFH	DNFH	NF Clearwater (DNFH)	12/31/2016	1,507,383	125,378	1,382,005	0		41,916	42,000	0	0	0	
Total						1,507,383	125,378	1,382,005	0	0	41,916	42,000	0	0	0	
KNFH	SpCS	KOOS	KNFH	Kooskia NFH	12/30	692,964	109,866	528,110	0	54,988	7,911			8,000		
Total						692,964	109,866	528,110	0	54,988	7,911	0	0	8,000	0	
NPTH	SpCS	DNFH	NPTH	NPTH	1/15/2017	137,632	47,931	1,965	86,488	1,300	646				650	
				Lolo Creek	1/15/2017	142,035	60,610	81,277	321	417	1,044				1,050	
Total						279,667	108,541	83,242	86,809	1,717	1,690	0	0	0	1,700	
CFH	SpCS	SFClw Dwor Dwor KNFH/Pow	CFH	Red River	11/28/2016	1,290,781	119,897	1,170,884	0	0	17,100	5,100	12,000	0	0	
				NF Clearwater (CFH)	11/28/2016	389,250	389,250	0	0	0	17,100	0	17,100	0	0	0
				Selway River-Lower	11/28/2016	484,045	115,538	217,894	150,613	0	17,100	5,100	12,000	0	0	0
				Clear Creek	11/28/2016	768,554	120,018	648,536	0	0	9,500	3,500	6,000	0	0	0
Total						2,932,630	0	0	0	0	0	0	0	0	0	
Spring Grand Total						2,932,630	744,703	2,037,314	150,613	0	60,800	13,700	47,100	0	0	
Summer																
CFH	SuCS	Pow/SFSR	CFH	Powell Pond	11/28/2016	618,985	121,083	185,689	0	312,213	25,500	13,500	12,000	0	0	
				Selway River	11/28/2016	155,241	0	141,891	0	13,350	0	0	0	0	0	0
Total						3,551,615	865,786	2,223,003	150,613	312,213	86,300	27,200	59,100	0	0	
Summer Grand Total						6,031,629	1,209,571	4,216,360	237,422	368,918	137,817	69,200	59,100	8,000	1,700	

Table 2.2c. BY2016 PARR and PRE-SMOLT - Sp/Su Chinook Salmon inventories by life stage, release goals and projected releases in 2017.

Hatchery Program	Run/ Life Stage	Brood Collection Site	Rearing Facility	Release Site	Inventory To Date		Release Goals		Projected Releases		
					Date	Number	Number	Size (FPP)	Dates	Number	Size
DNFH	SpCS/Parr	DNFH	DNFH	Selway River-Upper	12/31/16	334,067	300,000	100.0	9/4 - 9/22	300,000	100.0
Total						334,067	300,000			300,000	
NPTH	SpCS/Pre-Smolt	NPTH	NPTH	Newsome Cr (SF Clw)	12/31/16	650,011	75,000	30.0	10/16/2017	80,000	30.0
	SpCS/Pre-Smolt	NPTH		Lolo Cr (SF Clw)			150,000	30.0	10/16/2017	170,000	30.0
	SpCS/Parr	NPTH		Meadow Cr (Selway)			400,000	117.0	6/28/2017	400,011	117.0
Total						650,011	625,000			650,011	
Grand Total						984,078	925,000			950,011	

2.2.2. Releases in 2017 (Smolt BY 2015, Parr/Pre-Smolt BY 2016) – Total

Here are examples of things managers were instructed to discuss for each release group, if there are departures from the norm (i.e., SOP). If no departure from the norm, enter NC for “No Change”.

- **Smolt/Egg Release Targets-** e.g. were you below goal, was your size at release different than SOP target etc.
- **Fish/Egg Health-** any epizootic history, anti-biotic treatments, was production culled at any point
- **Transportation/Releases-** e.g. timing, trucking issues, site access etc.

Release Location	Plan for 2017		Changes/Conditions that Occurred 2016-Early 2017		
	Release Target Smolt BY15 Parr/Pre-Smolt BY16	Transport/Release Smolt BY15 Parr/Pre-Smolt BY16	Fish Feeding Smolt BY15 Parr/Pre-Smolt BY16	Fish/Egg Health Smolt BY15 Parr/Pre-Smolt BY16	Marking Smolt BY15 Parr/Pre-Smolt BY16
<i>Dworshak National Fish Hatchery (SOP Section 2.2)</i>					
NF Clearwater-DNFH (Dwor)	Releases will be approx. 1.5 million smolts, (9.1%) below release target of 1.65 million due to Phoma herbarum outbreak at hatchery.	NC	NC	NC	NC
Selway River Upper (Dwor-Parr)	NC	NC	NC	NC	NC
<i>Kooskia National Fish Hatchery (SOP Sections 2.3)</i>					
Kooskia National Fish Hatchery (Koosk)	NC	NC	NC	NC	NC

	Plan for 2017		Changes/Conditions that Occurred 2016-Early 2017		
Release Location	Release Target Smolt BY15 Parr/Pre-Smolt BY16	Transport/Release Smolt BY15 Parr/Pre-Smolt BY16	Fish Feeding Smolt BY15 Parr/Pre-Smolt BY16	Fish/Egg Health Smolt BY15 Parr/Pre-Smolt BY16	Marking Smolt BY15 Parr/Pre-Smolt BY16
<i>Nez Perce Tribal Hatchery (SOP Section 2.4)</i>					
Nez Perce Tribal Hatchery (Dwor Smolt)	Release will be approx. 137,000 smolts, (31.5%) below release target of 200,000 due to Phoma herbarum outbreak at DNFH during early rearing.	NC	Bio-Vita fed for BY16 instead of Bio-Pro2	High Incidence of <i>Phoma herbarum</i> mortality occurred before marking at DNFH, resulting in decreased realization of production goals	delayed due to illness
Lolo (Dwor-Smolt)	Release will be approx. 142,000 smolts, (21.1%) below release target of 180,000 million due to Phoma herbarum outbreak at DNFH during early rearing.	NC	Bio-Vita fed for BY16 instead of Bio-Pro2	High Incidence of <i>Phoma herbarum</i> mortality occurred before marking at DNFH, resulting in decreased realization of production goals	delayed due to illness
Lolo Creek (Pre-Smolt) (NPTH-Pre-Smolt)	NC	NC	Bio-Vita fed for BY16 instead of Bio-Pro2	NC	NC
Newsome Creek (NPTH-Pre-Smolt)	NC	NC	Bio-Vita fed for BY16 instead of Bio-Pro2	NC	NC
Meadow Creek Selway (NPTH-Parr)	NC	NC	Bio-Vita fed for BY16 instead of Bio-Pro2	NC	NC

	Plan for 2017		Changes/Conditions that Occurred 2016-Early 2017		
Release Location	Release Target Smolt BY15 Parr/Pre-Smolt BY16	Transport/Release Smolt BY15 Parr/Pre-Smolt BY16	Fish Feeding Smolt BY15 Parr/Pre-Smolt BY16	Fish/Egg Health Smolt BY15 Parr/Pre-Smolt BY16	Marking Smolt BY15 Parr/Pre-Smolt BY16
<i>Clearwater Fish Hatchery (SOP Sections 2.5)</i>					
Red River (SFCIw)	Actual release will be approx 189,232 (17.2%) fish above release target due to above average on-station survival	NC	NC	NC	NC
NF Clearwater - CFH (Dwor)		NC	NC	NC	NC
Selway River-Lower (Dwor)	Actual release will be approx 83,464 (20.9%) fish above release target due to above average on-station survival	NC	NC	NC	NC
Clear Creek (Koos/Dwor)	Actual release will be approx 132,632 (20.9%) fish above release target due to above average on-station survival	NC	NC	NC	NC
Powell (Pow/SFSR-Summer)	NC	NC	NC	NC	Ad clipped 306,772 No clip 312,213
Selway (Pow/SFSR-Summer)	Release target of zero. 155,055 summer Chinook to be released in Selway R in 2017	NC	NC	NC	Ad clipped, no CWT

2.3. Trap Operations and Production Planning for 2017 (Smolt and Parr/Pre-Smolt BY 2017)

When the Clearwater basin cooperators initially met in January 2017 for the AOP, there was some uncertainty regarding agreement on the level of Chinook smolt production that would be targeted for brood year 2017. Because of this, the table below that lists the production goals includes two production levels. The lower level includes only production listed in Table B1 of the 2008-2017 USvOR Agreement. The higher level of production includes all production that has been discussed to date for the Clearwater basin. In April of 2017, it was decided by the cooperators to target the upper level of production that includes 5,780,000 yearling spring-run smolts, 600,000 yearling summer-run smolts, and 925,000 spring run parr/presmolts. The number of trapped adults needed to meet this production level includes 5,142 spring Chinook and 432 summer Chinook.

BY2017 SMOLTS - Spring/Summer Chinook Goals for Release in 2019

Action in 2017	Brood/Release Year	Hatchery Program	Brood Collection Site	Rearing Facility	Release Site	Smolt Release Goal (US v OR)	Smolt Release Goal (Including Additional Production)		
Trapping	BY2017 RY2019	Spring							
		DNFH - LSRCP	DNFH	DNFH		NF Clearwater (DNFH)	1,050,000	1,650,000	
		Total					1,050,000	1,650,000	
		KNFH-LSRCP	KNFH	KNFH		Kooskia NFH	600,000	600,000	
		Total					600,000	600,000	
		NPTH	DNFH	NPTH		NPTH	200,000	200,000	
						Lolo Creek	0	180,000	
		Total					200,000	380,000	
				SFCIw			Red River	1,100,000	1,280,000
				DNFH			NF Clearwater (CFH)	0	389,000
				DNFH	CFH		Selway River-Lower	400,000	400,000
				KNFH/Dwor			Clear Creek	635,000	720,000
				KNFH/Dwor			New Production - TBD	0	361,000
		Total					2,135,000	3,150,000	
		Spring Grand Total					3,985,000	5,780,000	
		Summer							
		CFH-LSRCP	Pow/SFSR	CFH			Powell Pond	600,000	600,000
Summer Grand Total					600,000	600,000			

BY2017 PARR and PRE-SMOLT - Spring/Summer Chinook Goals for Release in 2018

Action in 2017	Brood/Release Year	Hatchery Program	Life Stage	Brood Collection Site	Rearing Facility	Release Site	Smolt Release Goal	
Trapping	BY2017 RY2018	Spring						
		DNFH	Parr	DNFH	DNFH	Selway River-Upper	300,000	
		Total						300,000
		NPTH	Pre-Smolt	NPTH	NPTH	Newsome Cr (SF Clw)	75,000	
			Pre-Smolt	NPTH		Lolo Cr (SF Clw)	150,000	
			Parr	NPTH		Meadow Cr (Selway)	400,000	
		Total						625,000
		Spring Grand Total						925,000

2.3.1. Trap Operations and Production Planning for 2017 (Smolt and Parr/Pre-Smolt BY 2017) – TOTALS

FULL PRODUCTION

Table 2.3a. 2017 Adult brood stock acquisition schedules for hatchery Sp/Su Chinook Salmon in Clearwater River drainage for FULL PRODUCTION.

Date	Spring				Summer
	Dworshak Trap	Kooskia Trap	NPTH Trap	Red River Trap	Powell
3-May					
10-May					
17-May			5		
24-May		14	10		
31-May		41	15		
7-Jun		455	68	9	
14-Jun		672	107	74	
21-Jun		756	180	157	22
28-Jun		784	233	314	56
5-Jul	210	952	282	508	143
12-Jul	603	1,034	355	628	182
19-Jul	1,127	1,077	389	675	200
26-Jul	1,651	1,112	433	684	204
2-Aug	2,148		457	702	204
9-Aug	2,620		457	711	208
16-Aug			486	739	217
23-Aug				832	221
30-Aug				924	273
6-Sep					382
13-Sep					434
20-Sep					
27-Sep					
Total	2,620	1,112	486	924	434
2017 LGR Forecast*	6620	2482	1020	2411	1156

*2- and 3-ocean returns only

FULL PRODUCTION

Table 2.3b. BY 2017 SMOLT - Sp/Su Chinook Spawning and Trapping Plan For FULL PRODUCTION

Hatchery Program	Brood Collection Site	Rearing Facility	Release Site	Green Egg Goal	Green Egg Fecundity	Female Spawn Goal	Male Spawn Goal	Holding Mortality	Total Trapping Goal	Estimated Trapping Dates	Projected Returns to LGD
Spring											
DNFH - LSRCP	DNFH	DNFH	NF Clearwater (DNFH)	2,198,707	3,907	563	563	10.5%	1,260	6/14-8/9	6620
Total				2,198,707	3,907	563	563		1,260		6620
KNFH-LSRCP	KNFH	KNFH	Kooskia NFH	933,510	3,648	256	256	13.6%	594		1397
Total				933,510	3,648	256	256		594		1397
NPTH	DNFH	NPTH	NPTH	266,510	3,907	68	68	10.5%	156	6/14-8/9	1020
			Lolo Creek	239,859	3,907	61	61	10.5%	140	6/14-8/9	
Total				506,369	7,814	129	129		296		1020
CFH-LSRCP	SFCIw	CFH	Red River	1,749,738	4,000	437	437	5.0%	924	6/1 - 8/30	2411
	DNFH/KNFH		NF Clearwater (CFH)	531,756	4,000	133	133	5.0%	280	N/A	
	DNFH/KNFH		Selway River-Lower	546,793	4,000	137	137	5.0%	290	N/A	593
	DNFH/KNFH		Clear Creek	984,228	4,000	246	246	5.0%	518	N/A	1085
	DNFH/KNFH		New Production - TBD	493,481	4,000	123	123	5.0%	262	N/A	
Total				3,812,516		953	953		2,274		4089
Spring Smolt Grand Total				7,451,102	15,369	1,901	1,901		4,424		13126
Summer											
CFH-LSRCP	Pow/SFSR	CFH	Powell Pond	820,190	4,000	206	206	5.0%	434	6/15 - 9/15	1156
Summer Smolt Grand Total				820,190	4,000	206	206		434		1156

FULL PRODUCTION

Table 2.3c. BY 2017 PARR and PRE-SMOLT - Sp/Su Chinook Spawning and Trapping Plan

Hatchery Program	Life Stage	Brood Collection Site	Rearing Facility	Release Site	Green Egg Goal	Green Egg Fecundity	Female Spawn Goal	Male Spawn Goal	Holding Mortality	Total Trapping Goal	Estimated Trapping Dates	Projected Returns to LGD
Spring												
DNFH	Parr	DNFH	DNFH	Selway River-Upper	399,765	3,907	102	102	10.5%	232	6/14-8/9	
Total					399,765	3,907	102	102	10.5%	232		0
NPTH	Pre-Smolt	NPTH	NPTH	Newsome Cr (SF Clw)	107,628	4,041	27	27	7.0%	60	4/24 - 8/30	
	Pre-Smolt	NPTH		Lolo Cr (SF Clw)	215,256	4,041	53	53	7.0%	118		
	Parr	NPTH		Meadow Cr (Selway)	574,015	4,041	142	142	7.0%	308		
Total					896,898	12,123	222	222		486		0
Spring Parr/Pre-smolt Grand Total					1,296,663	16,030	324	324		718		0

FULL PRODUCTION

Table 2.3d. Sp/Su Chinook Spawning and Trapping Plan Summarized by Trapping Facility for FULL PRODUCTION

Brood Collection Site	Female Spawn Goal	Male Spawn Goal	Total Trapping Goal	Projected Returns to LGD
Spring				
DNFH	1,249	1,249	2,620	6620
KNFH	502	502	1,112	2482
SFCIw	437	437	924	2411
NPTHC	27	27	486	1033
Summer				
Pow/SFSR	206	206	434	1156

BASE US v OR PRODUCTION

Table 2.3e. BY 2017 SMOLT - Sp/Su Chinook Spawning and Trapping Plan for BASE US v OR PRODUCTION

Hatchery Program	Brood Collection Site	Rearing Facility	Release Site	Green Egg Goal	Green Egg Fecundity	Female Spawn Goal	Male Spawn Goal	Holding Mortality	Total Trapping Goal	Estimated Trapping Dates	Projected Returns to LGD
Spring											
DNFH-LSRCP	DNFH	DNFH	NF Clearwater (DNFH)	1,396,881	3,907	358	358	10.5%	800	6/14-8/9	6620
Total				1,396,881	3,907	358	358		800		6620
KNFH-LSRCP	KNFH	KNFH	Kooskia NFH	933,510	3,648	256	256	13.6%	594		1397
Total				933,510	3,648	256	256		594		1397
NPTHC	DNFH	NPTH	NPTH	266,073	3,907	68	68	10.5%	152	6/14-8/9	1033
				0	0	0	0	0.0%	0		0
Total				266,073	3,907	68	68		152		1033
CFH-LSRCP	SFCIw	CFH	Red River	1,749,738	4,000	438	438	5.0%	924	6/1-8/30	2411
	DNFH/KNFH		NF Clearwater (CFH)	0	4,000	0	0	5.0%	0	N/A	0
	DNFH/KNFH		Selway River-Lower	546,793	4,000	137	137	5.0%	290	N/A	593
	DNFH/KNFH		Clear Creek	865,864	4,000	217	217	5.0%	458	N/A	1085
Total				3,162,395		792	792		1,672		4089
Spring Grand Total				5,758,859	11,462	1474	1474		3,218		13139
Summer											
CFH-LSRCP	Pow/SFSR	CFH	Powell Pond	820,190	4,000	206	206	5.0%	434	6/15-9/15	1156
Summer Grand Total				820,190	4,000	206	206		434		1156

BASE US v OR PRODUCTION

Table 2.3f. BY 2017 PARR and PRE-SMOLT - Sp/Su Chinook Spawning and Trapping Plan

Hatchery Program	Life Stage	Brood Collection Site	Rearing Facility	Release Site	Green Egg Goal	Green Egg Fecundity	Female Spawn Goal	Male Spawn Goal	Holding Mortality	Total Trapping Goal	Estimated Trapping Dates	Projected Returns to LGD
<i>Spring</i>												
DNFH	Parr	DNFH	DNFH	Selway River-Upper	399,765	3,907	103	103	10.5%	232	6/14-8/9	
Total					399,765	3,907	103	103		232		0
NPTHC	Pre-Smolt	NPTHC	NPTH	Newsome Cr (SF Clw)	107,628	4,041	27	27	7.0%	60	4/24 - 8/30	
	Pre-Smolt	NPTHC		Lolo Cr (SF Clw)	215,256	4,041	54	54	7.0%	118		
	Parr	NPTHC		Meadow Cr (Selway)	574,015	4,041	143	143	7.0%	308		
Total					896,898	12,123	224	224		486		0
Spring Grand Total					1,296,663	16,030	327	327		718		0

BASE US v OR PRODUCTION

Table 2.3g. Sp/Su Chinook Spawning and Trapping Plan Summarized by Trapping Facility for BASE US v OR PRODUCTION

Brood Collection Site	Female Spawn Goal	Male Spawn Goal	Total Trapping Goal	Projected Returns to LGD
<i>Spring</i>				
DNFH	883	883	1,474	6620
KNFH	473	473	1,052	2482
SFClw	438	438	924	2411
NPTHC	27	27	486	1033
<i>Summer</i>				
Pow/SFSR	206	206	434	1156

2.3.2. Trap Operations and Production Planning for 2017 (Smolts and Parr/Pre-Smolt BY2017) – NARRATIVE

Here are examples of things managers were instructed to discuss for each release group, if there are departures from the norm (i.e., SOP). If no departure from the norm, enter NC for “No Change”.

Juvenile Release Location	Plan for 2017 (BY 2017)				
	Adult Fish Health	Trap Ops	Production target changes	Spawning protocol changes	Disposition of adults
<i>Dworshak National Fish Hatchery Ladder/Trap (SOP Section 2.2)</i>					
NF Clearwater-DNFH (Dwor)	No antibiotic injections	Tissue samples will be taken for jacks for density study.	NC	NC	NC
Selway River Upper (Dwor-Parr)	No antibiotic injection	NC	NC	NC	NC
Nez Perce Tribal Hatchery (Dwor-Smolt)	No antibiotic injection	NC	NC	NC	NC
Lolo (Dwor-Smolt)	No antibiotic injection	NC	NC	NC	NC
NF Clearwater-CFH (Dwor)	No antibiotic injection	NC	NC	NC	NC
Selway River Lower (Dwor)					
Clear Creek (Dwor)					

Juvenile Release Location	Plan for 2017 (BY 2017)				
	Adult Fish Health	Trap Ops	Production target changes	Spawning protocol changes	Disposition of adults
<i>Kooskia National Fish Hatchery Trap (SOP Sections 2.3)</i>					
Kooskia National Fish Hatchery (Koos)	NC	NC	NC	NC	NC
Clear Creek (Koos)	NC				
<i>Nez Perce Tribal Hatchery Trap (SOP Section 2.4)</i>					
Lolo Creek (NPTH-Pre-Smolt)	NC	NC	NC	NC	NC
Newsome Creek (NPTH-Pre-Smolt)	N:C	NC	NC	NC	NC
Meadow Creek Selway (NPTH-Parr)	NC	NC	NC	NC	NC
<i>Red River and Crooked River Traps (SOP Section 2.5)</i>					
Red River (SFCIw)	NC	NC	NC	NC	NC
<i>Powell Trap (SOP Section 2.5)</i>					
Powell (Pow-Summer)	NC	NC	NC	NC	NC

2.4. Early Rearing and Marking Plan for 2017 (Smolts BY 2016, Parr/Pre-Smolt BY2016)

BY2016 SMOLTS - Spring/Summer Chinook Goals for Release in 2018

Action in 2017	Brood/Release Year	Hatchery Program	Brood Collection Site	Rearing Facility	Release Site	Smolt Release Goal	
Early Rearing and Marking	BY2016 RY2018	Spring					
		DNFH - LSRCP	DNFH	DNFH		NF Clearwater (DNFH)	1,650,000
		Total					1,650,000
		KNFH-LSRCP	KNFH	KNFH		Kooskia NFH	600,000
		Total					600,000
		NPTH	Dwor	NPTH		NPTH	200,000
						Lolo Creek	180,000
		Total					380,000
		CFH-LSRCP	SFCIw	CFH		Red River	1,244,000
			DNFH			NF Clearwater (CFH)	389,000
			DNFH			Selway River-Lower	400,000
			KNFH/Pow			Clear Creek	706,000
		Total					2,739,000
		Spring Grand Total					5,369,000
		Summer					
CFH-LSRCP	Pow/SFSR	CFH		Powell Pond	600,000		
Summer Grand Total					600,000		

BY2016 PARR and PRE-SMOLT - Spring Chinook Goals for Release in 2017

Action in 2017	Brood/Release Year	Hatchery Program	Life Stage	Brood Collection Site	Rearing Facility	Release Site	Smolt Release Goal	
Early Rearing, Marking and Release	BY2016 RY2017	Spring						
		DNFH	Parr	DNFH	DNFH	Selway River-Upper	300,000	
		Total					300,000	
		NPTH	Pre-Smolt	NPTH			Newsome Cr (SF Clw)	75,000
			Pre-Smolt	NPTH		NPTH	Lolo Cr (SF Clw)	150,000
			Parr	NPTH			Meadow Cr (Selway)	400,000
		Total					625,000	
Spring Grand Total					925,000			

2.4.1. Early Rearing and Marking Plan for 2017 (Smolts BY 2016, Parr/Pre-Smolt BY2016) – TOTALS

Table 2.4a. BY 2016 Sp/Su Chinook Salmon - Early Rearing Inventory for smolt releases in 2018 (including anticipated set out)

Hatchery Program	Run	Brood Collection Site	Rearing Facility	Release Site	Release Goals for 2018	Size (FPP)	Inventory to Date		
							Date	Goal ¹	Actual
Spring									
DNFH	SpCS	DNFH	DNFH	NF Clearwater (DNFH)	1,650,000	2,000.00	12/31/16	1,792,898	1,837,552
Totals					1,650,000			1,792,898	1,837,552
KNFH	SpCS	KNFH	KFH	Kooskia NFH	600,000		12/31/2016	732,000	772,045
Totals					600,000			732,000	772,045
NPTH	SpCS	DNFH	NPTH	NPTH	200,000	2,000.00	12/31/16	217,222	222,632
				Lolo Creek	180,000	2,000.00	12/31/16	195,500	200,369
Totals					380,000			412,722	423,001
CFH	SpCS	Red R. DNFH DNFH KNFH/Pow	CFH	Red River	1,244,000	1,600.0	1/10/2017	1,443,040	1,552,822
				NF Clearwater (CFH)	389,000	1,600.0	1/10/2017	451,240	434,233
				Selway River-Lower	400,000	1,600.0	1/10/2017	464,000	533,494
				Clear Creek	706,000	1,600.0	1/10/2017	818,960	887,131
Totals					2,739,000			3,177,240	3,407,680
Spring Grand Total					5,369,000			6,114,860	6,440,278
Summer									
CFH	SuCS	Pow/SFSR	CFH	Powell Pond	600,000		1/10/2017	696,000	666,745
Totals					600,000			696,000	666,745
Summer Grand Total					600,000			696,000	666,745

¹ Estimated fish needed in vats to reach eventual smolt release goals, based on brood calculator exclusive of the 7% buffer.

Table 2.4b. BY 2016 SMOLTS - Sp/Su Chinook Projected Marking of BY 2016 juveniles to be released in 2018.

Hatchery Program	Run	Brood Collection Site	Rearing Facility	Release Site	Release Goals for 2018	Likely Marking Date(s)	Inventory to Date		Projected Marking				Projected PIT Tags ¹				
							Date	Number	Adipose Fin Clip		No Clip		Total # Tags	Funding Source			
									No CWT	CWT	CWT	No CWT		CSS	LSRCP	USFWS	BPA
Spring																	
DNFH	SpCS	DNFH	DNFH	NF Clearwater (DNFH)	1,650,000	8/14 - 8/30	12/31/2016	1,837,552	1,717,552	120,000	0	0	42,000	42,000	0	0	0
Totals					1,650,000			1,837,552	1,717,552	120,000	0	0	42,000	42,000	0	0	0
KFH	SpCS	KFH	KFH	Kooskia NFH	600,000	7/10 - 7/14	12/31	772,045	58,000	100,000		58,000	8,000			8,000	
Totals					600,000			772,045	58,000	100,000	0	58,000	8,000	0	0	8,000	0
NPTH	SpCS	DNFH	NPTH	NPTH	200,000	8/14	12/31/2016	222,632	0	75,695	146,937	0	600				600
				Lolo Creek	180,000	8/9 - 8/11	12/31/2016	200,369	138,369	62,000	0	0	1,000				1,000
Totals					380,000			423,001	138,369	137,695	146,937	0	1,600	0	0	0	1,600
CFH	SpCS	Red R. DNFH DNFH DNFH	CFH	Red River	1,244,000	5/1/5/5/2017	1/10/2017	1,552,822	1,124,000	120,000				5,100	12,000		
				NF Clearwater (CFH)	389,000	5/29-6/9/2017	1/10/2017	434,233		400,000					17,100		
				Selway River-Lower	400,000	5/29-6/9/2017	1/10/2017	533,494	187,000	80,000	133,000			5,100	12,000		
				Clear Creek	706,000	5/29-6/9/2017	1/10/2017	887,131	586,000	120,000				3,500	6,000		
Totals					2,739,000			3,407,680	1,897,000	720,000	133,000	0	0	13,700	47,100	0	0
Spring Grand Total					5,369,000			6,440,278	3,810,921	1,077,695	279,937	58,000	51,600	55,700	47,100	8,000	1,600
Summer																	
CFH	SuCS	Pow/SFSR	CFH	Powell Pond	600,000	5/29-6/9/2017	1/10/2017	666,745	180,000	120,000	120,000	180,000	25,500	13,500	12,000		
Totals					600,000			666,745	180,000	120,000	120,000	180,000	25,500	13,500	12,000	0	0
Grand Totals					600,000			666,745	180,000	120,000	120,000	180,000	25,500	13,500	12,000	0	0

¹ PIT Tagging occurs in spring 2018

Table 2.4c. BY2016 PARR and PRE-SMOLT - Sp Chinook Salmon Inventory to Date by Projected Mark Type for release in 2017.

Hatchery Program	Run/ Life Stage	Brood Collection Site	Rearing Facility	Release Site	Inventory to Date		Projected Marking & Tagging				PIT Tags					
					Date	Total	Adipose Fin Clip		No Clip		Total # Tags	Funding Source				
							No CWT	CWT	CWT	No CWT		CSS	LSRCP	USFWS	BPA	
DHFH	Parr	DNFH	DNFH	Selway River-Upper	12/31/2016	334,067	0	0	0	310,955	0	0	0	0	0	0
Total						334,067	0	0	0	310,955	0	0	0	0	0	0
NPTH	Pre-Smolt	NPTH	NPTH	Newsome Cr (SF Clw)	12/31/2016	650,011	0	0	80,000	0	3,000				3,000	
	Pre-Smolt			Lolo Cr (SF Clw)			0	0	170,000	0	6,000			6,000		
	Parr			Meadow Cr (Selway)			0	0	0	400,011	5,000			5,000		
Total						650,011	0	0	250,000	400,011	14,000	0	0	0	14,000	
Spring Grand Total						984,078	0	0	250,000	710,966	14,000	0	0	0	14,000	

2.4.2. Early Rearing and Marking Plan for 2017 (Smolts BY 2016, Parr/Pre-Smolt BY2016) – NARRATIVE

Here are examples of things managers were instructed to discuss for each release group, if there are departures from the norm (i.e., SOP). If no departure from the norm, enter NC for “No Change”.

- **Fish Health** - fish health issues, action taken and how was the treatment implemented, anticipated changes to normal fish health sampling or treatments
- **Fish feeding** - changes of diets of feed manufacturer, growth regimes etc.
- **Rearing conditions** - incubation, water temp, flow, rearing density changes
- **Marking** - e.g. schedule changes, planned changes to fish handling or movement, marking schedule, raceway loading for PBT etc.
- **Current Inventory** - . If projected marking lines up with the current inventory, then no comment is needed at this bullet (enter NC). If current inventory is significantly above or below the projected numbers, then explain why.

Plan for 2017 (Smolts BY 2016, Parr/Pre-Smolt BY2016)					
Release Location	Juvenile Fish Health	Fish Feeding	Rearing Conditions	Marking	Meets Release Target
<i>Dworshak National Fish Hatchery (SOP Section 2.2)</i>					
NF Clearwater-DNFH (Dwor)	NC	NC	Trial use of baffles in 4 raceways.	NC	NC
Selway River Upper (Dwor-Parr)	NC	NC	NC	NC	NC
Nez Perce Tribal Hatchery (Dwor)	NC	NC	NC	NC	NC
Lolo Creek (Dwor)	NC	NC	NC	NC	NC
<i>Kooskia National Fish Hatchery (SOP Sections 2.3)</i>					
Kooskia National Fish Hatchery (Koos)	NC	NC	NC	NC	NC

Plan for 2017 (Smolts BY 2016, Parr/Pre-Smolt BY2016)					
Release Location	Juvenile Fish Health	Fish Feeding	Rearing Conditions	Marking	Meets Release Target
<i>Nez Perce Tribal Hatchery (SOP Section 2.4)</i>					
Lolo Creek (NPTH-Pre-Smolt)	NC	Bio-Vita fed for BY16 instead of Bio-Pro2	NC	NC	NC
Newsome Creek (NPTH-Pre-Smolt)	NC	Bio-Vita fed for BY16 instead of Bio-Pro2	NC	NC	NC
Meadow Creek Selway (NPTH-Parr)	NC	Bio-Vita fed for BY16 instead of Bio-Pro2	NC	NC	NC
<i>Clearwater Fish Hatchery (SOP Sections 2.5)</i>					
Red River (SFClw/Koos/Dwor)	NC	NC	NC	NC	
NF Clearwater - CFH (Koos/Dwor)	NC	NC	NC	NC	
Selway River-Lower (Koos/Dwor)	NC	NC	NC	NC	NC
Clear Creek (Koos/Dwor)	NC	NC	NC	NC	
Powell (Pow/SFSR-Summer)	NC	NC	NC	NC	NC

3. Coho Salmon

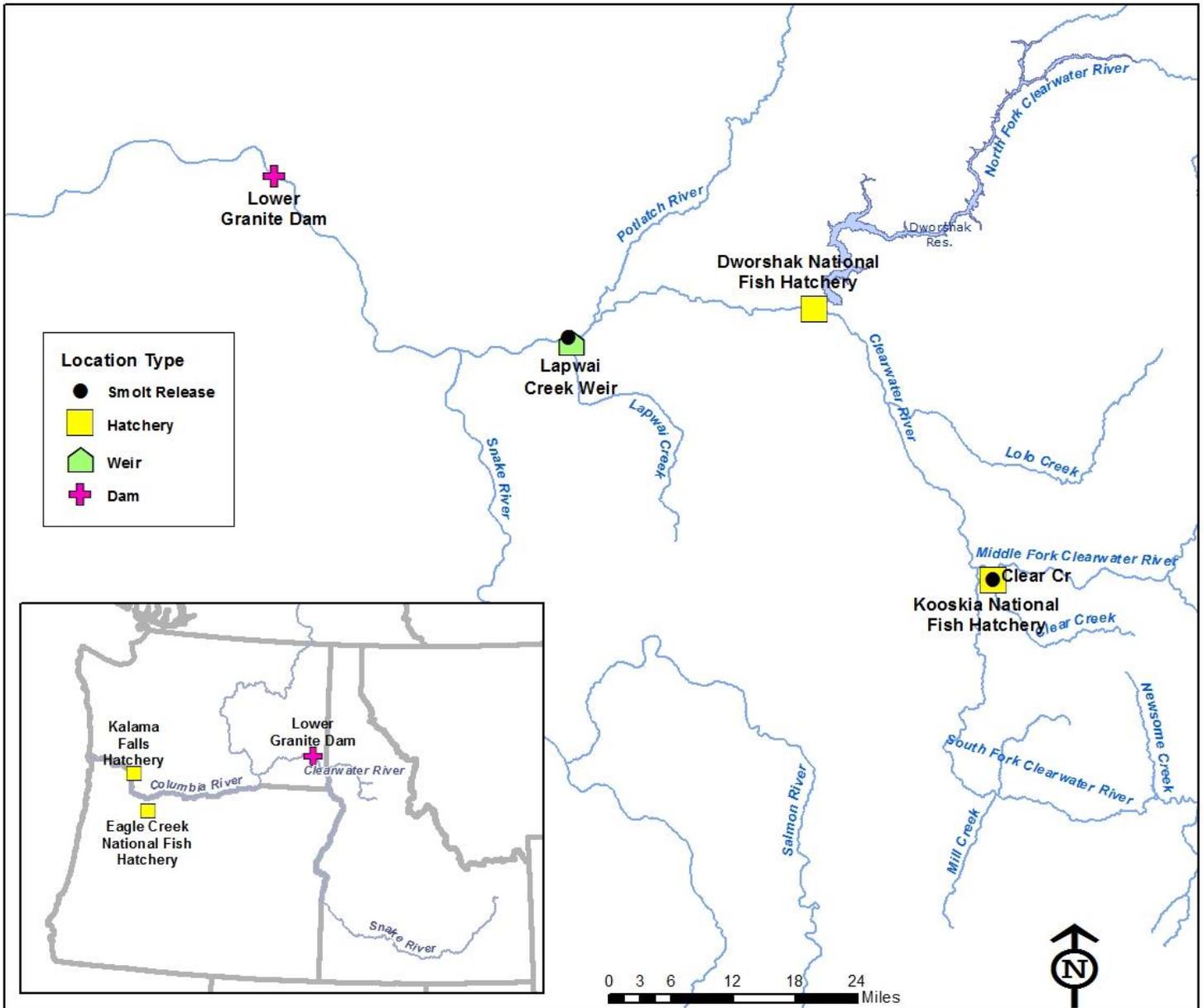


Figure 3.1. Coho trapping, hatchery facilities and smolt release locations.

Table 3.1. BY2015 SMOLTS - Coho Release Goals for 2017

Hatchery Program	Species	Brood Collection Site	Rearing Facility	Release Site	2017 Smolt Release Goal
NPT	Coho	CLW Umatilla R. Kalama, OR	DNFH	Clear Creek	400,000
Total					400,000
NPT	Coho	ECNFH	ECNFH	Lapwai Creek	275,000
	Coho	ECNFH		Clear Creek	275,000
Total					550,000
Grand Total					950,000

3.1. Timeline and Flowchart for Coho Production

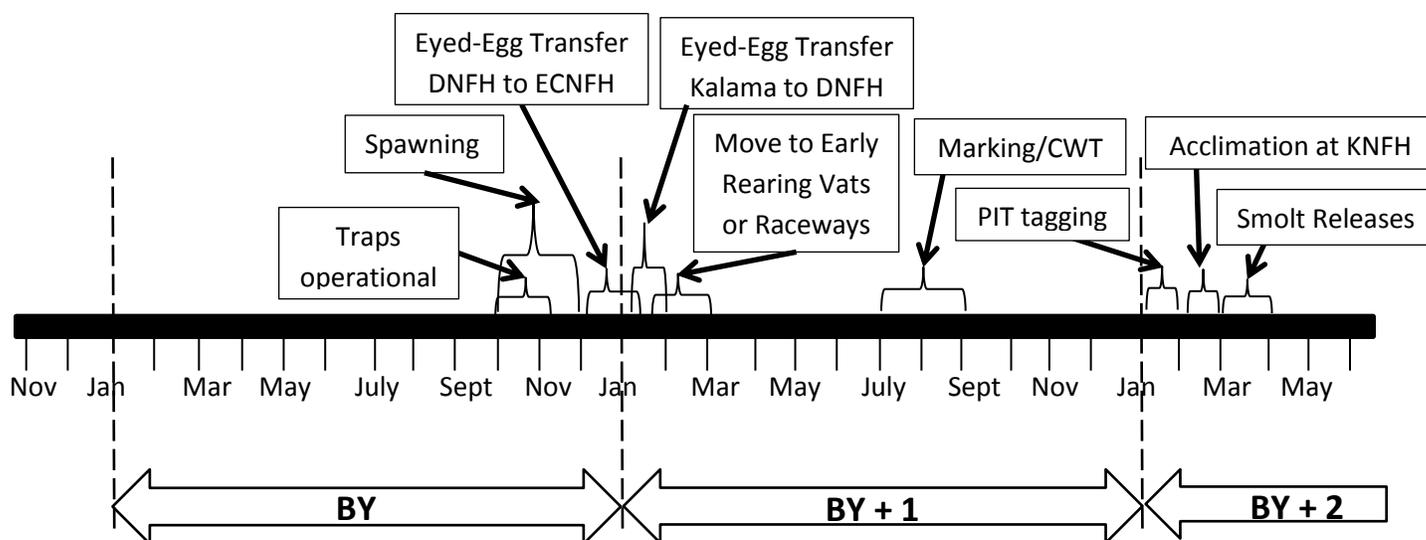


Figure 3.2. Timeline for Coho Production. Date ranges with black labels are shown to include all facilities' operations.

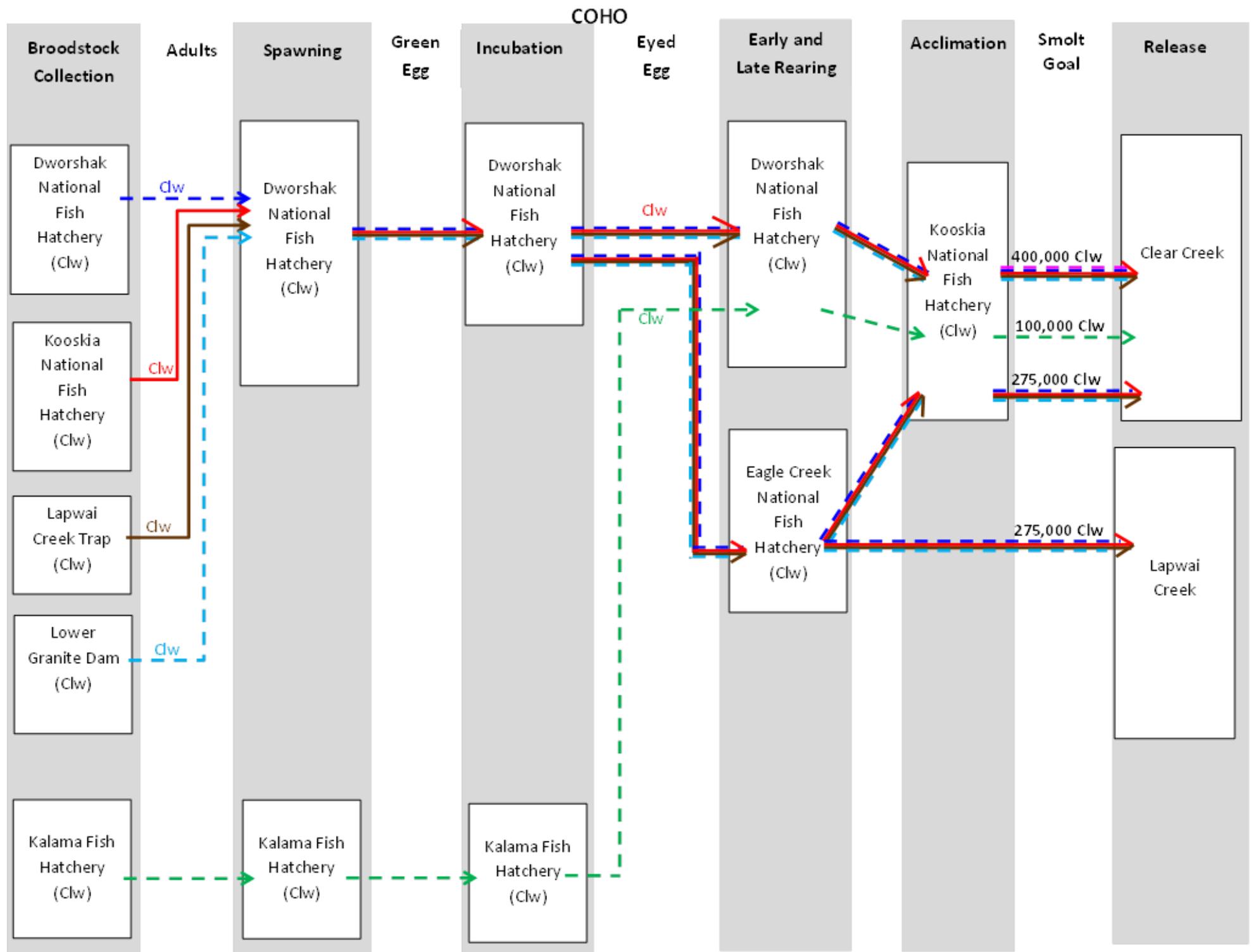


Figure 3.3. Coho movements in Clearwater.

3.2. Releases in 2017 (Smolt BY 2015)

3.2.1. Releases in 2017 (Smolt BY 2015) – Totals

Table 3.2a. BY2015 SMOLTS - Coho Salmon inventories by life stage, smolt release goals, and projected releases in 2017.

Rearing Facility	Species	Brood Collection Site	Rearing Facility	Release Site	Inventory To Date		Release Goals		Projected Smolt Release		
					Date	Number	Number	(FPP)	Dates	Number	(FPP)
DNFH	Coho	CLW	DNFH	KNFH/Clear Creek	3/2	289,124	400,000	20.0	3/29	287,963	20.0
		Umatilla R.									
		Kalama, Or									
Total						289,124	400,000			287,963	
ECNFH	Coho	BONN	ECNFH	KNFH/Clear Creek	3/10	272,957	550,000	20.0	4/3	271,792	20.0
Total						272,957	550,000			271,792	
Grand Total						562,081	950,000			559,755	

Table 3.2b. BY2015 SMOLTS - Coho Salmon Inventory to Date by Mark Type for release in 2017.

Hatchery Program	Species	Brood Collection Site	Rearing Facility	Release Site	Inventory to Date						PIT Tags				
					Date	Total	Adipose Fin Clip		No Clip		Total # Tags	Funding Source			
							No CWT	CWT	CWT	CWT		Mitchell Act	PCSRF	IPC	BPA
NPT	Coho	Kalama	DNFH	KNFH/Clear Creek	3/29	287,970	0	0	81,212	206,758	4,983	4,983	0	0	0
		Umatilla											0	0	
		Clw											0	0	
Total						287,970	0	0	81,212	206,758	4,983	4,983	0	0	0
NPT	Coho	ECNFH	ECNFH	KNFH/Clear Creek	3/10	274,289	214,289	60,062	0	0	4,992	4,992	0	0	0
													0	0	
Total						274,289	214,289	60,062	0	0	4,992	4,992	0	0	0
Grand Total						562,259	214,289	60,062	81,212	206,758	9,975	9,975	0	0	0

3.2.2. Releases in 2017 (Smolt BY 2015) – Total

Here are examples of things managers were instructed to discuss for each release group, if there are departures from the norm (i.e., SOP). If no departure from the norm, enter NC for “No Change”.

- **Smolt/Egg Release Targets-** e.g. were you below goal, was your size at release different than SOP target etc.
- **Fish/Egg Health-** any epizootic history, anti-biotic treatments, was production culled at any point
- **Transportation/Releases-** e.g. timing, trucking issues, site access etc.

	Plan for 2017		Changes/Conditions that Occurred 2016-Early 2017		
Location	Release Target Smolt BY15	Transport/Release Smolt BY15	Fish Feeding Smolt BY15	Fish/Egg Health Smolt BY15	Marking Smolt BY15
<i>Dworshak National Fish Hatchery (SOP Section 3.2)</i>					
Clear Creek - DNFH (Clw)					
<i>Eagle Creek National Fish Hatchery (SOP Section 3.3)</i>					
Lapwai Creek (Clw)					
Clear Creek (Clw)					

3.3. Trap Operations and Production Planning for 2017 (Smolt BY 2017)

3.3.1. Trap Operations and Production Planning for 2017 (Smolt BY 2017) – TOTALS

Table 3.3a. BY 2017 SMOLTS - Coho Smolt Production Goals for Release in 2019.

Hatchery Program	Species	Brood Collection Site	Rearing Facility	Release Site	2019 Smolt Release Goal
NPT	Coho	LAP, DNFH, KNFH, LGR	DNFH	Clear Creek	400,000
Total					400,000
NPT	Coho	LAP, DNFH, KNFH, LGR	ECNFH	Lapwai Creek	275,000
	Coho			Clear Creek	275,000
Total					550,000
Grand Total					950,000

3.3.2. Trap Operations and Production Planning for 2017 (Smolts BY 2017) – NARRATIVE

Here are examples of things managers were instructed to discuss for each release group, if there are departures from the norm (i.e., SOP). If no departure from the norm, enter NC for “No Change”.

Location	Plan for 2017 (BY 2017)				
	Adult Fish Health	Trap Ops	Production target changes	Spawning protocol changes	Disposition of adults
<i>Primary Trapping Facilities (SOP Section 3.2)¹</i>					
Kooskia National Fish Hatchery Trap (Clw)					
Lapwai Creek Trap (Clw)					
<i>Secondary Trapping Facilities (SOP Section 3.2)¹</i>					
Dworshak National Fish Hatchery Trap (Clw)					

	Plan for 2017 (BY 2017)				
Location	Adult Fish Health	Trap Ops	Production target changes	Spawning protocol changes	Disposition of adults
Lower Granite Dam (Clw)					

¹ If brood stock collection at primary and secondary trapping locations falls short of goals, green eggs from Eagle Creek National Fish hatchery and/or Kalama Fish Hatchery may be used as a source.

3.4. Early Rearing and Marking Plan for 2017 (Smolts BY 2016)

BY2016 SMOLTS - Coho Release Goals for 2018

Hatchery Program	Species	Brood Collection Site	Rearing Facility	Release Site	2018 Smolt Release Goal
NPT	Coho	LAP, DNFH, KNFH	DNFH	Clear Creek	400,000
Total					400,000
KAL	Coho	Kalama	DNFH	Clear Creek	100,000
Total					100,000
NPT	Coho	LAP, DNFH, KNFH	ECNFH	Lapwai Creek	275,000
	Coho			Clear Creek	275,000
Total					550,000
Grand Total					1,050,000

3.4.1. Early Rearing and Marking Plan for 2017 (Smolts BY 2016) – TOTALS

Table 3.4a. BY 2016 Coho - Early Rearing Inventory (including anticipated set out)

Rearing Hatchery	Species	Stock	Inventory to Date		
			Date	Goal ¹	Actual
DNFH	Coho	Clw	3/31	400,000	892,338
DNFH	Coho	Kal	3/31	100,000	140,315
ECNFH	Coho	Clw	Shipped to ECNFH Dec 16	550,000	670,101

¹ Estimated fish needed in vats to reach eventual smolt release goals, based on brood calculator

Table 3.4b. BY 2016 SMOLTS - Coho Projected Marking of BY 2016 fish in 2017

Hatchery Program	Species	Brood Collection Site	Rearing Facility	Release Site	Likely Marking Date(s)	Release Goals for 2018	Inventory to Date		Projected Marking				PIT Tags ¹				
									Adipose Fin Clip		No Clip		Total # Tags	Funding Source			
							Date	Number	No CWT	CWT	CWT	No CWT		Mitchell Act	LSRCP	IPC	BPA
DNFH	Coho	LAP, DNFH, KNFH, LGR	DNFH	Clear Creek		400,000	4/3	892,338	0	0	100,000	0	5,000	5,000	0	0	0
Total						400,000		892,338	0	0	100,000	0	5,000	5,000	0	0	0
DNFH	Coho	Kalama	DNFH	Clear Creek		100,000	4/3	140,315									
Total						100,000		1,032,653									
ECNFH	Coho			Lapwai Creek		275,000	1/30	670,101	0	0	30,000	0	5,000	5,000	0	0	0
	Coho			Clear Creek		275,000			0	0	30,000	0	5,000	5,000	0	0	0
Total						550,000		670,101	0	0	60,000	0	10,000	10,000	0	0	0
Grand Total						1,050,000		1,702,754	0	0	160,000	0	15,000	15,000			

¹ PIT Tagging occurs in spring 2018

3.4.2. Early Rearing and Marking Plan for 2017 (Smolts BY 2016) – NARRATIVE

Here are examples of things managers were instructed to discuss for each release group, if there are departures from the norm (i.e., SOP). If no departure from the norm, enter NC for “No Change”.

- **Fish Health** - observed fish health issues, what action was taken and how was the treatment implemented, anticipated changes to normal fish health sampling or treatments
- **Fish feeding** - changes of diets of feed manufacturer, growth regimes etc.
- **Rearing conditions** - incubation, water temp, flow, rearing density changes
- **Marking** - e.g. schedule changes, planned changes to fish handling or movement, marking schedule, raceway loading for PBT etc.
- **Current Inventory** - . If projected marking lines up with the current inventory, then no comment is needed at this bullet (enter NC). If current inventory is significantly above or below the projected numbers, then explain why.

Release Location	Plan for 2017 (Smolts BY 2016)				
	Juvenile Fish Health	Fish Feeding	Rearing Conditions	Marking	Meets Release Target
<i>Dworshak National Fish Hatchery (SOP Section 3.2)</i>					
Clear Creek - DNFH (Clw)					
Clear Creek - Kalama (Clw)					
<i>Eagle Creek National Fish Hatchery (SOP Sections 3.3)</i>					
Clear Creek (Clw)					
Lapwai Creek (Clw)					

4. Fall Chinook

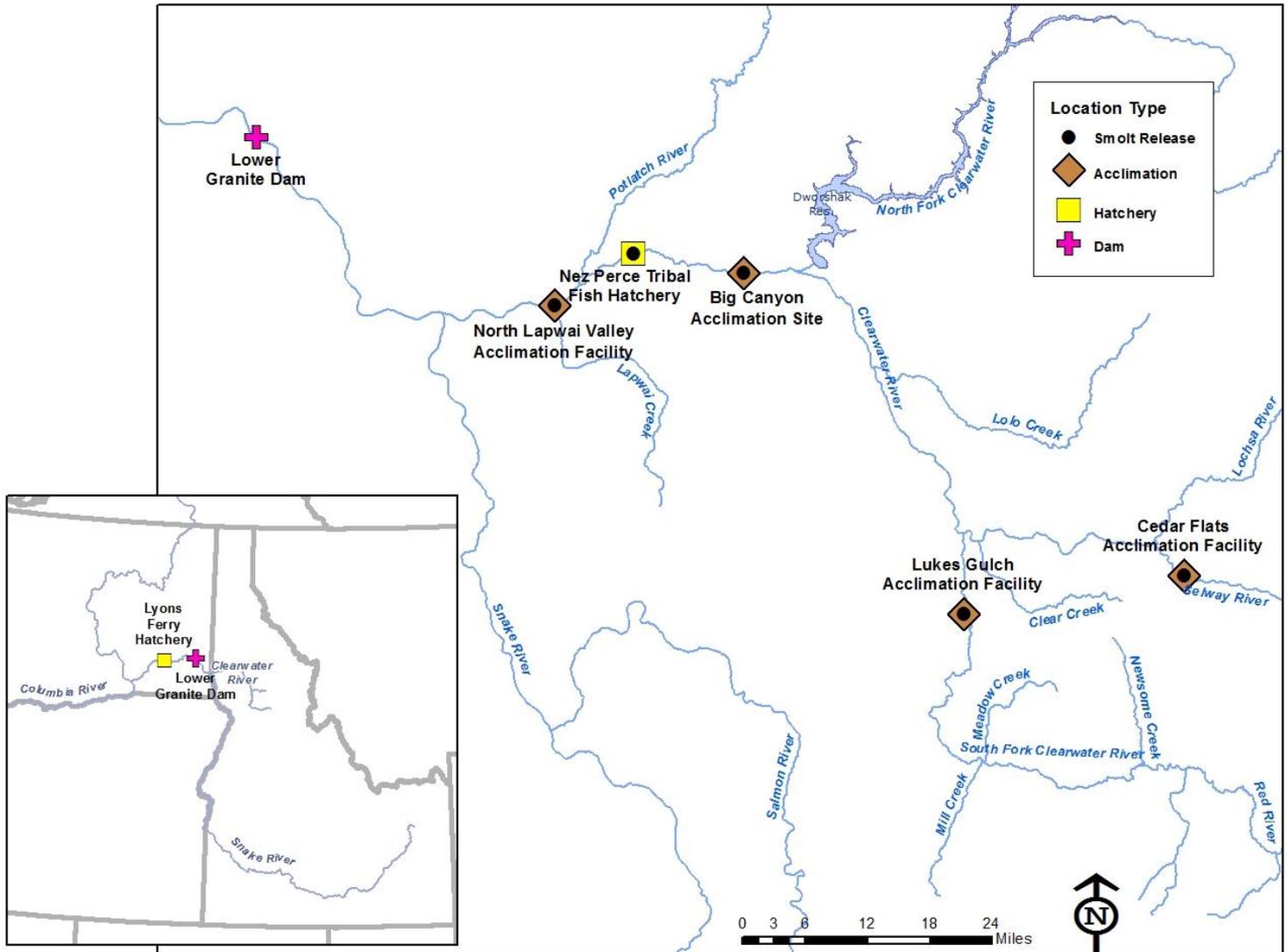


Figure 4.1. Fall Chinook Salmon hatchery and acclimation facilities, and sub-yearling and yearling release locations.

Table 4.1. Fall Chinook Goals for Release in 2017

BY2016 SUB-YEARLINGS

Hatchery Program	Brood Collection Site	Rearing Facility	Release Site	Sub-Yearling Release Goal
NPT	SnakeR	Lyons Ferry	Big Canyon Creek	500,000
Total				500,000
NPT	SnakeR	NPTH	NPTH	500,000
	SnakeR		N Lapwai Valley	500,000
	SnakeR		Lukes Gulch	200,000
	SnakeR		Cedar Flats	200,000
Total				1,400,000
Grand Total				1,900,000

BY2015 YEARLINGS

Hatchery Program	Brood Collection Site	Rearing Facility	Release Site	Yearling Release Goal
NPT	SnakeR	Lyons Ferry	Big Canyon Creek	150,000
Total				150,000
Grand Total				150,000

4.1. Timeline and Flowchart for Fall Chinook Production

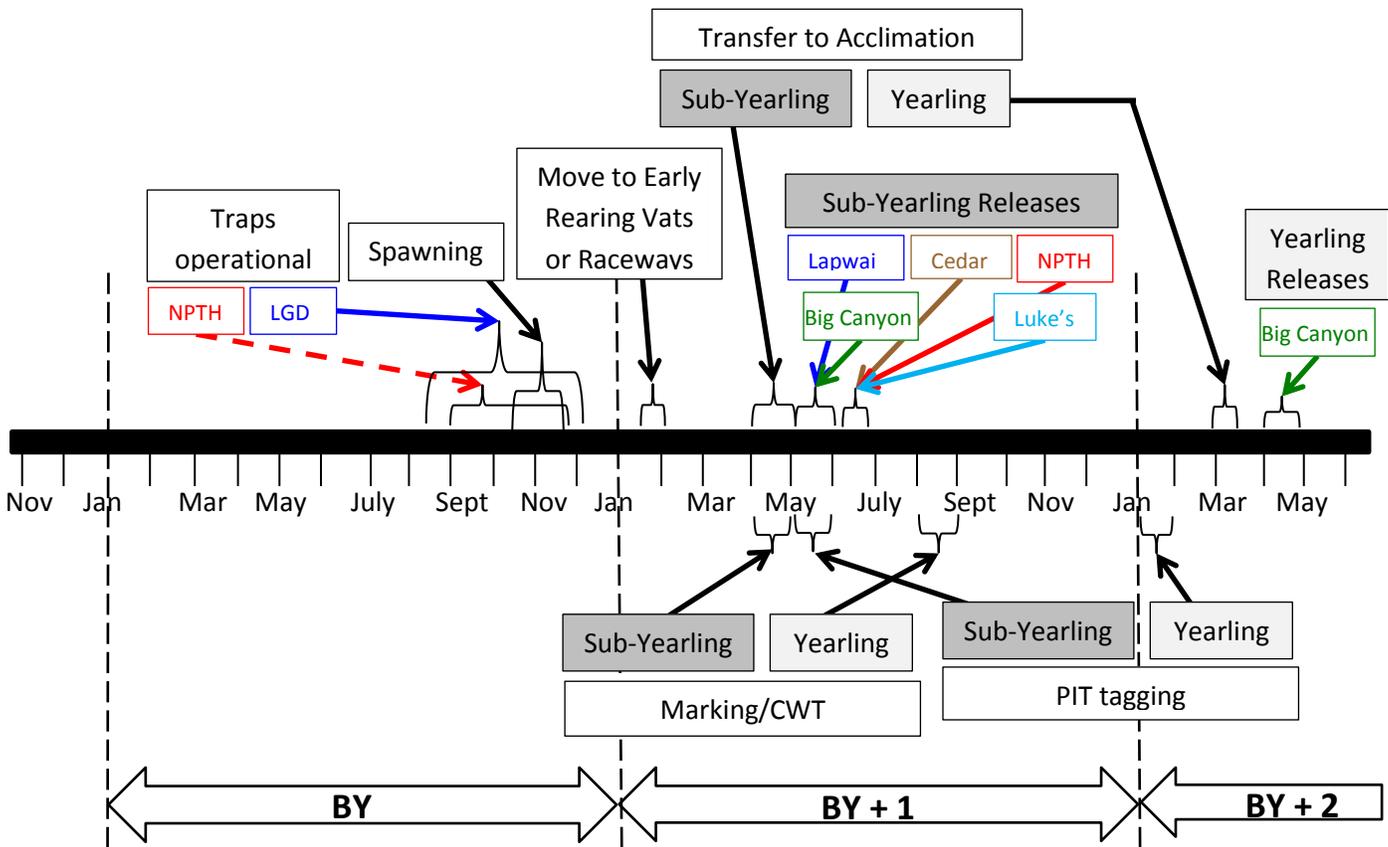


Figure 4.2. Timeline for Fall Chinook Production. Date ranges with black labels are shown to include all facilities' operations. Color-coded labels identify activities that have variability in timing for the different facilities.

FALL CHINOOK

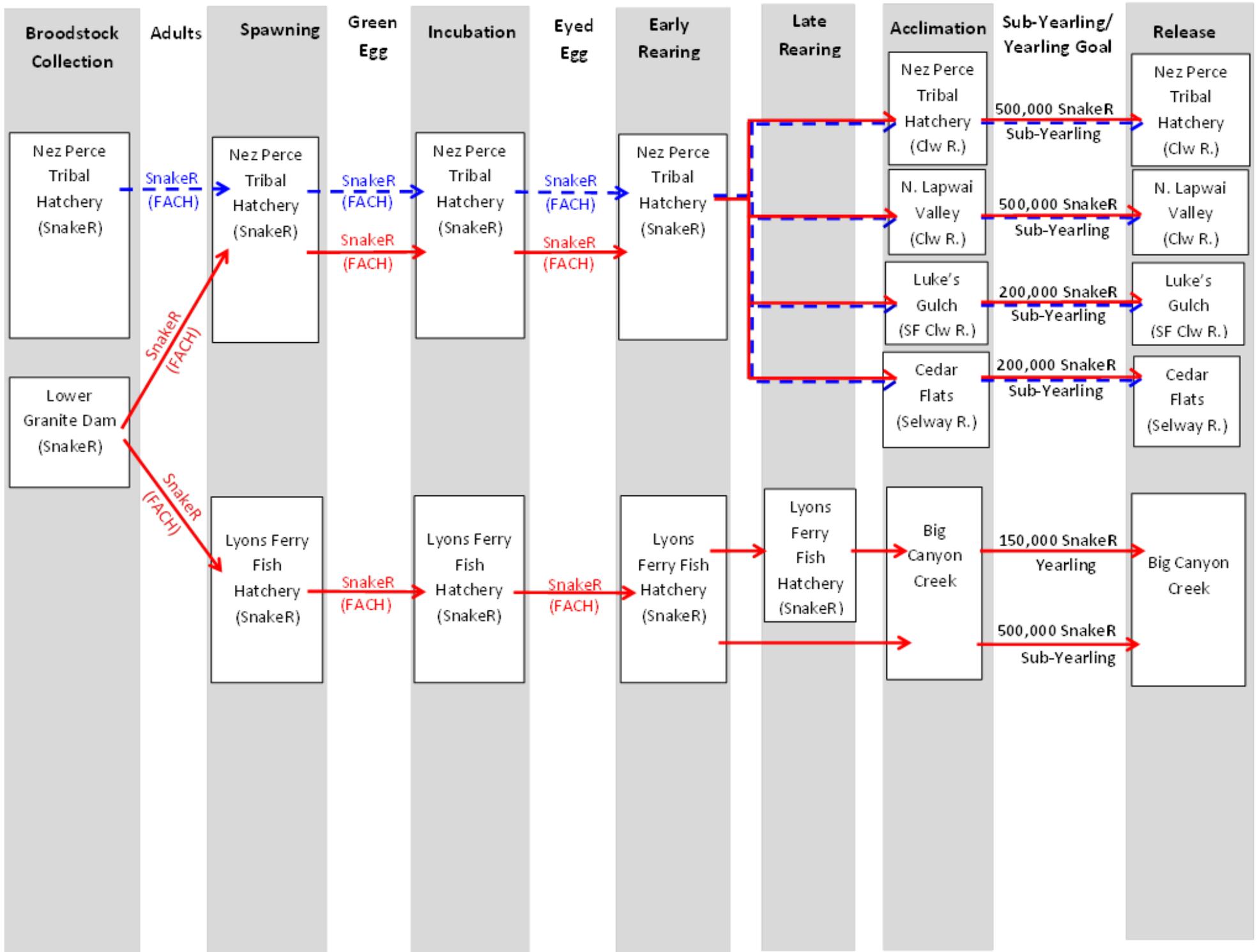


Figure 4.3. Fall Chinook movements in Clearwater.

4.2. Releases in 2017 (Sub-Yearling BY 2016, Yearling BY 2015)

4.2.1. Releases in 2017 (Sub-Yearling BY 2016, Yearling BY 2015) – Totals

Table 4.2a. BY2015 YEARLINGS - Fall Chinook Salmon inventories by life stage , smolts release goals and projected releases in 2017.

Hatchery Prtogram	Species	Brood Collection Site	Rearing Facility	Release Site	Inventory To Date		Release Goals		Projected Parr and Pre-Smolt Release		
					Date	Number	Number	(FPP)	Dates	Number	(FPP)
NPT	FACH	SnakeR	Lyons Ferry	Big Canyon Creek	7/27/2016	152,462	150,000	50	4/12/2017	150,000	10.0
Total							152,462	150,000		150,000	
Grand Total							152,462	150,000		150,000	

Table 4.2b. BY2015 YEARLINGS - Fall Chinook Salmon Inventory to Date by Mark Type for release in 2017.

Rearing Facility	Species	Brood Collection Site	Rearing Facility	Release Site	Inventory to Date				PIT Tags							
					Date	Total	Adipose Fin Clip		No Clip		Total # Tags	Funding Source				
							No CWT	CWT	CWT	No CWT		CSS	LSRCP	IPC	BPA	
NPT	FACH	SnakeR	Lyons Ferry	Big Canyon Creek	7/27	152,462	0	71,404	81,058	0	1,500	0	0	0	1,500	
Total							152,462	0	71,404	81,058	0	1,500	0	0	0	1,500
Grand Total							152,462	0	71,404	81,058	0	1,500	0	0	0	1,500

Table 4.2c. BY2016 SUB-YEARLINGS - Fall Chinook Salmon inventories by life stage , smolts release goals and projected releases in 2017.

Hatchery Prtogram	Species	Brood Collection Site	Rearing Facility	Release Site	Inventory To Date		Release Goals		Projected Sub-Yearling Release		
					Date	Number	Number	(FPP)	Dates	Number	(FPP)
NPT	FACH	Snake R.	SnakeR	Big Canyon Creek	2/2/2017	550,000	500,000	50.0	5/25/2017	500,000	50.0
Total							550,000	500,000		500,000	
NPTHC	FACH	Snake R.	NPTH	NPTH	1/25/2017	629,568	500,000	50.0	6/12/2017	629,568	50.0
	FACH	Snake R.		N Lapwai Valley	1/25/2017	498,214	500,000	50.0	5/31/2017	498,214	50.0
	FACH	Snake R.		Lukes Gulch	1/25/2017	242,778	200,000	50.0	6/12/2017	242,778	50.0
	FACH	Snake R.		Cedar Flats	1/25/2017	237,984	200,000	50.0	6/12/2017	237,984	50.0
Total							1,608,544	1,400,000		1,608,544	
Grand Total							2,158,544	1,900,000		2,108,544	

Table 4.2d. BY2016 SUB-YEARLINGS - Fall Chinook Salmon Inventory to Date by Mark Type for release in 2017.

Hatchery Program	Species	Brood Collection Site	Rearing Facility	Release Site	Inventory to Date ¹				PIT Tags							
					Date	Total	Adipose Fin Clip		No Clip		Total # Tags	Funding Source				
							No CWT	CWT	CWT	No CWT		CSS	LSRCP	IPC	BPA	
NPT	FACH	Snake R.	Lyons Ferry	Big Canyon Creek	2/2/2017	550,000	0	100,000	100,000	350,000	11,500				11,500	
Total							550,000	0	100,000	100,000	350,000	11,500	0	0	0	11,500
NPTHC	FACH	Snake R.	NPTH	NPTH	1/15/2017	629,568	0	100,000	200,000	329,568	2,000				2,000	
	FACH	Snake R.		N Lapwai Valley	1/15/2017	498,214	0	100,000	200,000	198,214	2,000				2,000	
	FACH	Snake R.		Lukes Gulch	1/15/2017	242,778	0	100,000	100,000	42,778	2,000				2,000	
	FACH	Snake R.		Cedar Flats	1/15/2017	237,984	0	100,000	100,000	37,984	2,000				2,000	
Total							1,608,544	0	400,000	600,000	608,544	8,000	0	0	0	8,000
Grand Total							2,158,544	0	500,000	700,000	958,544	19,500	0	0	0	19,500

¹ Projected marking numbers.

4.2.2. Releases in 2017 (Sub-Yearling BY 2016, Yearling BY 2015) - Narrative

Here are examples of things managers talk about for each release group, if there are departures from the norm (i.e., SOP). If no departure from the norm, enter NC for “No Change”.

- **Smolt Release Targets**- e.g. Were you below goal? Was you size at release different than SOP target? Did you depart from the mark plan?
- **Fish Health**- any epizootic history, anti-biotic treatments, was production culled at any point
- **Transportation/Releases**- e.g. timing, trucking issues, site access etc.

	Plan for 2017		Changes/Conditions that Occurred 2016-Early 2017		
Release Location	Release Target Yrlng BY15, Sub-Yrlng BY16	Transport/Release Yrlng BY15, Sub-Yrlng BY16	Fish Feeding Yrlng BY15, Sub-Yrlng BY16	Fish/Egg Health Yrlng BY15, Sub-Yrlng BY16	Marking Yrlng BY15, Sub-Yrlng BY16
<i>Nez Perce Tribal Hatchery (SOP Section 4.2)</i>					
Nez Perce Tribal Hatchery (Clw R.)	500,000	NC	NC	NC	NC
N. Lapwai Valley (Clw R.)	May be kept and marked as an additional on station release group or potential direct up river release. Management decision has not been addressed yet.	TBD	Bio-Vita fed for BY16 instead of Bio-Pro2	NLV Release Group will be released at NPTH	NLV Release Group will be released at NPTH
Luke’s Gulch (SF Clw R.)	NC	NC	Bio-Vita fed for BY16 instead of Bio-Pro2	NC	NC
Cedar Flats (Selway R.)	NC	NC	Bio-Vita fed for BY16 instead of Bio-Pro2	NC	NC
<i>Lyons Ferry Fish Hatchery (SOP Section 4.3)</i>					
Big Canyon Creek Sub-Yearling	500,000				NC
Big Canyon Creek Yearling					NC

4.3. Trap Operations and Production Planning for 2017 (Sub-Yearling and Yearling BY 2017)

4.3.1. Trap Operations and Production Planning for 2017 (Sub-Yearling and Yearling BY 2017) – TOTALS

Table 4.3a. BY 2017 SUB-YEARLINGS - Fall Chinook Production Goals for Release in 2018

Hatchery Program	Species	Brood Collection Site	Rearing Facility	Release Site	2018 Sub-Yearling Release Goal
	FACH	SnakeR	Lyons Ferry	Big Canyon Creek	500,000
Total					500,000
	FACH	Snake R.	NPTH	NPTH	500,000
	FACH	Snake R.		N Lapwai Valley	500,000
	FACH	Snake R.		Lukes Gulch	200,000
	FACH	Snake R.		Cedar Flats	200,000
Total					1,400,000
Grand Total					1,900,000

Table 4.3b. BY2017 YEARLINGS - Fall Chinook Production Goals for Release in 2019

Hatchery Program	Species	Brood Collection Site	Rearing Facility	Release Site	2019 Yearling Release Goal
	FACH	SnakeR	Lyons Ferry	Big Canyon Creek	150,000
Total					150,000
Grand Total					150,000

4.3.2. Trap Operations and Production Planning for 2017 (Sub-Yearling and Yearling BY 2017) – NARRATIVE

Here are examples of things managers were instructed to discuss for each release group, if there are departures from the norm (i.e., SOP). If no departure from the norm, enter NC for “No Change”.

	Plan for 2017 (BY 2017)				
Rearing Location	Adult Fish Health	Trap Ops	Production target changes	Spawning protocol changes	Disposition of adults
<i>Lower Granite Dam Ladder/Trap (SOP Sections 4.2 and 4.3)</i>					
Nez Perce Tribal Hatchery (SnakeR)	NC	NC	NC	NC	NC
Lyons Ferry Fish Hatchery – Sub-Yearling (SnakeR)					
Lyons Ferry Fish Hatchery – Yearling (SnakeR)					
<i>Nez Perce Tribal Hatchery Trap (SOP Section 4.2)</i>					
Nez Perce Tribal Hatchery (SnakeR)	NC	NC	NC	NC	NC

4.4. Early Rearing and Marking Plan for 2017 (Sub-Yearling BY 2016, Yearling BY 2015)

4.4.1. Early Rearing and Marking Plan for 2017 (Sub-Yearling BY 2016, Yearling BY 2016) – NARRATIVE

Here are examples of things managers were instructed to discuss for each release group, if there are departures from the norm (i.e., SOP). If no departure from the norm, enter NC for “No Change”.

- **Fish Health** - fish health issues, action taken and how was the treatment implemented, anticipated changes to normal fish health sampling or treatments
- **Fish feeding** - changes of diets of feed manufacturer, growth regimes etc.
- **Rearing conditions** - incubation, water temp, flow, rearing density changes
- **Marking** - e.g. schedule changes, planned changes to fish handling or movement, marking schedule, raceway loading for PBT etc.
- **Current Inventory** - . If projected marking lines up with the current inventory, then no comment is needed at this bullet (enter NC). If current inventory is significantly above or below the projected numbers, then explain why.

Plan for 2017 (Sub-Yearling BY 2016 and Yearling BY 2016)					
Release Location	Juvenile Fish Health	Fish Feeding	Rearing Conditions	Marking	Meets Release Target
<i>Nez Perce Tribal Hatchery (SOP Section 4.2)</i>					
Nez Perce Tribal Hatchery (Clw R.)	NC	NC	NC	NC	NC
N. Lapwai Valley (Clw R.)	NC	NC	NPTH On Station S-Channels	Use NLV Marking Program - 200k CWT, 100k CWT/AD	NC
Luke’s Gulch (SF Clw R.)	NC	NC	NC	NC	NC
Cedar Flats (Selway R.)	NC	NC	NC	NC	NC
<i>Lyons Ferry Fish Hatchery (SOP Sections 4.3)</i>					
Big Canyon Creek Sub-Yearling					
Big Canyon Creek Yearling					

5. Lamprey

5.1. Releases in 2017 - Narrative

Here are examples of things managers talk about for each release group, if there are departures from the norm (i.e., SOP). If no departure from the norm, enter NC for “No Change”.

- **Release Targets-** e.g. Were you below goal? Did you depart from the mark plan?
- **Fish Health-** any epizootic history, anti-biotic treatments
- **Transportation/Releases-** e.g. timing, trucking issues, site access etc.

Release Location	Plan for 2017		Changes/Conditions that Occurred 2016-Early 2017		
	Release Target	Transport/Release	Fish Feeding	Fish Health	Marking
<i>Nez Perce Tribal Hatchery (SOP Section 5.1)</i>					
Lolo Creek	59	May	No feeding, no change	typical low mortality	genetic tissue clips
Orofino Creek	59	May	No feeding, no change	typical low mortality	genetic tissue clips
Newsome Creek	59	May	No feeding, no change	typical low mortality	genetic tissue clips
Big Canyon Creek	14	May	No feeding, no change	typical low mortality	genetic tissue clips
SF Salmon River	59	May	No feeding, no change	typical low mortality	genetic tissue clips
Johnson Creek	59	May	No feeding, no change	typical low mortality	genetic tissue clips
Asotin Creek	59	May	No feeding, no change	typical low mortality	genetic tissue clips
Wallowa River	59	May	No feeding, no change	typical low mortality	genetic tissue clips
Minam River	59	May	No feeding, no change	typical low mortality	genetic tissue clips
Secesh River	59	May	No feeding, no change	typical low mortality	genetic tissue clips
Joseph Creek	59	May	No feeding, no change	typical low mortality	genetic tissue clips

5.2. Trap Operations for 2017

5.2.1. Trap Operations for 2017 - Narrative

Here are examples of things managers were instructed to discuss for each release group, if there are departures from the norm (i.e., SOP). If no departure from the norm, enter NC for “No Change”.

	Plan for 2017				
Trapping Location	Adult Fish Health	Trap Ops	Trapping target changes	Holding protocol changes	Disposition of adults
<i>Primary Trapping Facilities (SOP Sections 5.1)</i>					
Bonneville Dam	elevated river temps	CRITFC staff	CRITFC allocations TBD	TBD coordinate CRITFC	TBD
John Day Dam	elevated river temps	CRITFC staff	CRITFC allocations TBD	TBD coordinate CRITFC	TBD
The Dalles Dam	elevated river temps	CRITFC staff	CRITFC allocations TBD	TBD coordinate CRITFC	TBD

Appendix 1. Clearwater Brood Calculator

PROGRAM INPUTS						HISTORICAL HATCHERY PERFORMANCE METRICS (5-YR AVG)												COMMENTS				
SPECIES	HATCHERY	PROGRAM	PREFERED TRAPPING SITE	FORMAL RELEASE GOAL	COMANAGER APPROVED CUSHION % ¹	% FEMALES IN BROODSTOCK	% MORTALITY DURING HOLDING	GREEN EGG FECUNDITY	% SURVIVAL AFTER DISEASE CULLING ²	% SURVIVAL GREEN TO EYED EGG	% SURVIVAL EYED EGG TO RELEASE	RELEASE GOAL WITH CUSHION	EYED EGGS	GREEN EGGS	GREEN EGGS BEFORE DISEASE CULL	FEMALES SPAWNED	MALES SPAWNED		TOTAL ADULTS SPAWNED	TRAPPED ADULTS NEEDED	ADULTS TRAPPED TO MEET 1:1 RATIO	SMOLTS PER TRAPPED ADULTS NEEDED
STLHD	DNFH	NF Clearwater	DNFH	1,135,000	5.0%	67%	4.7%	6,681	87.0%	90.0%	81.0%	1,191,750	1,471,296	1,634,774	1,879,050	281	281	564	592	897	2,013	
	DNFH	SF Clearwater	SFCLW	400,000	5.0%	67%	4.7%	6,681	87.0%	90.0%	81.0%	420,000	518,519	576,132	662,220	99	99	198	208	315	2,019	
	DNFH AIR SPN	NF Clearwater	DNFH	565,000	5.0%	67%	4.7%	6,037	87.0%	90.0%	81.0%	593,250	732,407	813,786	935,386	155	155	310	326	494	1,820	
	MVH	Salmon River	DNFH	93,000	5%	67%	3.5%	6,681	100.0%	84.0%	85.0%	97,650	114,882	136,765	136,765	20	20	42	44	67	2,219	
	CFH	Clearwater	SFCLW	843,000	5%	67%	3.5%	6,681	100.0%	84.0%	85.0%	885,150	1,041,353	1,239,706	1,239,706	186	186	372	386	585	2,293	
SP/SU CHIN	DNFH	NF Clearwater	DNFH	1,650,000	4%	56%	10.5%	3,907	94.2%	90.2%	92.0%	1,718,750	1,868,207	2,071,182	2,198,707	563	563	1,126	1,260	1,432	1,364	Includes the New Production started in BY2015. Added production by increasing densities to 65k in all B-Bank rcwys.
	DNFH	Selway Parr	DNFH	300,000	4%	56%	10.5%	3,907	94.2%	90.2%	92.0%	312,500	339,674	376,579	399,765	102	102	206	232	264	1,347	
	DNFH	Transfer to NPTHC	DNFH	200,000	4%	56%	10.5%	3,907	94.2%	90.2%	92.0%	208,333	226,449	251,052	266,510	68	68	138	156	177	1,335	
	DNFH	Transfer to NPTHC-Lolo Parr	DNFH	180,000	4%	56%	10.5%	3,907	94.2%	90.2%	92.0%	187,500	203,804	225,947	239,859	61	61	124	140	159	1,339	New production started in BY2015, Lolo release group.
	KNFH	Clear Creek	KNFH	600,000	10%	50%	13.6%	3,648	88.2%	93.1%	87.0%	666,667	766,284	823,076	933,510	256	256	512	594	594	1,122	
	CFH	SF Clearwater	RR	1,280,000	5%	50%	5.0%	4,000	92.0%	93.0%	90.0%	1,347,368	1,497,076	1,609,759	1,749,738	437	437	876	924	924	1,458	
	CFH	Selway	DNFH	400,000	5%	50%	5.0%	4,000	92.0%	93.0%	90.0%	421,053	467,836	503,050	546,793	137	137	274	290	290	1,452	
	CFH	Clear Creek	KNFH	720,000	5%	50%	5.0%	4,000	92.0%	93.0%	90.0%	757,895	842,105	905,490	984,228	246	246	492	518	518	1,463	
	CFH	NF Clearwater	DNFH	389,000	5%	50%	5.0%	4,000	92.0%	93.0%	90.0%	409,474	454,971	489,216	531,756	133	133	266	280	280	1,462	NEW PRODUCTION in 2015. First timing rearing smolt in the adult holding ponds
	CFH	All CFH Spring Chinook Programs		361,000	5%	50%	5.0%	4,000	92.0%	93.0%	90.0%	380,000	422,222	454,002	493,481	123	123	248	262	262	1,450	NEW PRODUCTION in 2015. Increasing rearing densities across raceways and spreading the new smolts across release groups
	CFH - SU	Powell	PO, SFS	600,000	5%	50%	5.0%	4,000	92.0%	93.0%	90.0%	631,579	701,754	754,575	820,190	206	206	412	434	434	1,455	
	NPTHC	Lolo	NPTHC	150,000	1%	50%	7.0%	4,041	91.0%	85.0%	91.0%	151,515	166,500	195,883	215,256	53	53	108	118	118	1,284	
	NPTHC	Newsome	NPTHC	75,000	1%	50%	7.0%	4,041	91.0%	85.0%	91.0%	75,758	83,250	97,941	107,628	27	27	54	60	60	1,263	
NPTHC	Meadow	NPTHC	400,000	1%	50%	7.0%	4,041	91.0%	85.0%	91.0%	404,040	444,000	522,353	574,015	142	142	286	308	308	1,312		
FACH	NPTHC	Snake River	LGD/NPTH	1,400,000	1%	50%	25.0%	4,003	98.0%	89.0%	96.0%	1,414,000	1,472,917	1,654,963	1,688,737	422	422	844	1,126	1,126	1,256	
COHO	DNFH	Clearwater		300,000	10%	50%	16.0%	2,505	94.3%	82.3%	90.0%	330,000	366,667	445,525	472,454	189	189	378	450	447	733	
	CFH	Clearwater		500,000	10%	50%	16.0%	2,505	94.3%	82.3%	83.1%	550,000	661,853	804,196	852,806	340	340	682	812	812	677	
	ECFH	Clearwater		550,000	10%	50%	16.0%	2,505	94.3%	82.3%	83.1%	605,000	727,951	884,509	937,973	374	374	750	894	888	677	
											CELL FORMULAS	C/(1-D)	K/(J)	L/(I)	M/(H)	ROUND (N/G,0)	O=P	O+P	EVEN (Q/(1-F),0)	(R/2)/(1-E)	K/R	

¹ In the 2013 AOP process, the co-managers approved a 10% cushion to meet release targets

² Culling of eggs for BKD, IHN, etc.

Appendix 2. Sites, release numbers for adult Spring Chinook Salmon, when all Clearwater Basin Production Programs are above broodstock, harvest and C&S needs.*

Release Location	Hatchery Source	Guideline Range	Proposed Max
<i>Selway Basin</i>			
McGruder	RR, NPTH, Clear, DNFH, KNFH	800 - 1,000	6,000
O'Hara Creek	RR, NPTH, Clear, DNFH	200	
Lower Selway	RR, NPTH, Clear, DNFH, KNFH	0 - 2,000	3,400
<i>SF Clearwater R.</i>			
Mill Creek	RR, NPTH, Clear, DNFH	150	
Meadow Creek	RR, NPTH, Clear, DNFH	150 - 300	
SF Clearwater R.	RR, NPTH, Clear, DNFH	0 - 500	
<i>Lochsa River</i>			
Main Lochsa, Badger Cr., Boulder Cr.	RR, NPTH, Clear, DNFH	500	
	TOTAL	1,800 - 4,650	10,000

*Release Locations are not prioritized. If guideline range is likely to be exceeded, co-managers will discuss disposition of excess fish.

*There are weekly conference calls scheduled for Tuesdays, to keep all parties updated, informed, and coordinated on in-season run development, harvest estimates, broodstock collection, outplanting plans, etc...

Appendix 3. Proposed hatchery identifying marks for adult spring Chinook salmon outplanting in the Clearwater River.

Hatchery / Location	Mark	Purpose
Dworshak	left opercle v-notch	outplant
Kooskia	1) 1 right opercle v-notches	outplant / fishery recycle
	2) if recycle returnees - additional opercle v-notch	outplant / fishery recycle
Clear Creek above weir	right opercle v-notch	natural spawners
Lochsa (Powell satellite)	left opercle punch	fishery recycle / outplant
Crooked Fork Cr. weir	right opercle punch	ISS - natural fish above weir
Red River/Crooked River	1) right opercle punch	fishery recycle
	2) 2 right opercle punches	outplant (early)
Rapid River	dorsal punch	Clearwater (Selway) outplants
Lower Lolo Cr. weir	left and right opercle punch	NPT weir evaluation (fish collected at weir and released above weir)
Upper Lolo Cr. weir	right opercle punch	NPT weir evaluation (fish collected at weir and released above weir)
Newsome Cr. above weir	left opercle punch	NPT weir evaluation (fish collected at weir and released above weir)
NPTH	left opercle punch	outplant / fishery recycled to Lenore Boat Launch